SPECIAL POSTERS, displayed all week

Special **Significant Improvements to the PSI Mass Spectrometer Data File Standard: mzML 1.1**; Matthew Chambers[2]; Lennart Martens[1]; Marc Sturm[3]; Darren Kessner[4]; Fredrik Levander[5]; Jim Shofstahl[6]; Wilfred Tang[7]; Angel D. Pizarro[8]; Luisa Montecchi-Palazzi[1]; Natalie Tasman[9]; Mike Coleman[10]; Puneet Souda[11]; Henning Hermjakob[1]; Pierre-alain Binz[12]; Eric Deutsch[9]; *[1]EMBL-EBI Wellcome Trust Genome Campus, Hinxton, UK; [2]Vanderbilt University, Nashville, TN; [3]Eberhard Karls University, Tuebingen, Germany; [4]Cedars-Sinai Center for Applied Proteomics, Los Angeles, CA; [5]Lund University, Lund, Sweden; [6]Thermo Fisher Scientific, San Jose, CA; [7]Applied Biosystems, Foster City, CA; [8]University of Pennsylvania, Philadelphia, PA; [9]Institute for Systems Biology, Seattle, WA; [10]Stowers Institute, Kansas City, MO; [11]UCLA, Los Angeles, CA; [12]Genebio -Geneva Bioinformatics, Geneva, Switzerland*

Special **Teaching the Masses. Development of a Mass Spectrometry Tutorial for the Biomedical Researcher**; James A. Kelley[1]; Josip Blonder[2]; Terry L. Sumpter[2]; Timothy D. Veenstra[2]; Lawrence R. Phillips[1]; *[1]National Institutes of Health, Frederick, MD; [2]SAIC-Frederick, Inc., Frederick, MD*

Special **PSI Transitions Markup Language (TraML) for Exchange of Selected Reaction Monitoring Transition Lists**; Eric Deutsch[1]; Matthew Chambers[2]; Lennart Martens[3]; Brendan Maclean[4]; Jim Shofstahl[5]; Darren Kessner[6]; Fredrik Levander[7]; Pierre-Alain Binz[8]; Ruedi Aebersold[1,9]; Mi-Youn Brusniak[10]; *[1]Institute for Systems Biolog, Seattle, WA; [2]Vanderbilt University, Nashville, TN; [3]European Bioinformatics Institute, Hinxton, UK; [4]University of Washington, Seattle, WA; [5]Thermo Fisher Scientific, San Jose, CA; [6]Cedars-Sinai Center for A, Los Angeles, CA; [7]Lund University, Lund, Sweden; [8]Genebio -Geneva Bioinformatics, Geneva, Switzerland; [9]Swiss Federal Institute of Technology, Zurich, Switzerland; [10]Institute for Systems Bio, Seattle, WA*

Special **Commercialization of Mass Spectrometry**; Michael A. Grayson; *Retired, St Charles, MO*

Special ABRF 1 (Mon-Tues) **PRG 2009 Study: Relative Protein Quantification in a Clinical Matrix**; Michael J. Maccoss[2]; Allis S. Chien[1]; David B. Friedman[3]; David Hawke[4]; Jeroen Krijgsveld[5]; Kathryn S. Lilley[6]; Robert E. Settlage[7]; Nicholas E. Sherman[8]; Chris Turck[9]; *[1]Stanford University, Stanford, CA; [2]University of Washington, Seattle, WA; [3]Vanderbilt University School of Medicine, Nashville, TN; [4]UT- M.D. Anderson Cancer Center, Houston, TX; [5]EMBL, Gene Expression Unit, Heidelberg, Germany; [6]University of Cambridge, Cambridge, UK; [7]Virginia Bioinformatics Institute, Blacksburg, VA; [8]University of Virginia, Charlottesville, VA; [9]Max Planck Institute, Munich, Germany*

Special ABRF 2 (Wed-Thurs) **PRG2009 Study: Evaluation of a Quantitative Proteomics Standards by Proteomics Laboratories**; James Farmar[1]; David Arnott[2]; Alexander R. Ivanov[3]; Jeffrey A. Kowalak[4]; William S. Lane[5]; Karl Mechtler[6]; Brett Phinney[7]; Manfred R. Raida[8]; Susan T. Weintraub[9]; *[1]Einstein College of Medicine, Tarrytown, NY; [2]Genentech, Inc., S. San Francisco, CA; [3]Harvard University HSPH, Boston, MA; [4]NIH, Bethesda, MD; [5]Harvard University, Cambridge, MA; [6]IMP Research Institute of Mo, Vienna, Austria; [7]Univeristy of CA, Davis, Davis, CA; [8]Experimental Therapeutics Ce, Singapore, Singapore; [9]University of Texas HSC, San Antonio, TX*

PROTEOMICS: QUANTITATION TECHNIQUES, 001-032

MP 001 **Towards Robust Quantitative MRM Plasma Analysis Using Nanobore Liquid Chromatography through Improved Nanoelectrospray Performance**; Susan E. Abbatiello[1]; Amanda Berg[2]; Gary Valaskovic[2]; Steven A. Carr[1]; *[1]Broad Institute, Cambridge, MA; [2]New Objective, Inc., Woburn, MA*

MP 002 **Improved Multiple Reaction Monitoring for Targeted Quantitative Proteomics Using Dual-Stage Electrodynamic Ion Funnel Technology**; David T. Kaleta; Errol W. Robinson; Tao Liu; Wei-Jun Qian; Rui Zhao; Jason S. Page; Keqi Tang; David G. Camp II; Richard D. Smith; *Pacific Northwest National Laboratory, Richland, WA*

MP 003 **CaptiveSpray: A New Ionization Technique to Maximizing Speed, Sensitivity, Resolution and Robustness for LCMS Protein Biomarker Quantitation**; Kerry Nugent[1]; Yixin Zhu[1]; Peter Kent[1]; Brett Phinney[2]; Rudy Alvarado[2]; *[1]Michrom Bioresources, Inc., Auburn, CA; [2]Univeristy of CA, Davis, Davis, CA*

MP 004 **Detection and Quantitation of Active Ricin in Food**; Sara C. Mcgrath[1]; David M. Schieltz[1]; Lisa G. Mcwilliams[2]; John R. Barr[1]; *[1]Centers for Disease Control and Prevention, Atlanta, GA; [2]Battelle, Atlanta, GA*

MP 005 **Analyzing More Than 8-Samples with iTRAQ – Exploring the Changes in the Human Serum Proteome during Pregnancy**; Marjan Gucek[1]; Peter Scholl[2,3]; Ingo Ruczinski[2]; John D. Groopman[2]; Keith P. West[2]; Robert N. Cole[1]; *[1]Johns Hopkins School of Medicine, Baltimore, MD; [2]Bloomberg School of Public Health, Johns Hopkins, Baltimore, MD; [3]US FDA, College Park, MD*

MP 006 **Assessing the Quantitative Dynamic Range of 8-Plex iTRAQ Proteomics Reagents in Simple and Complex Mixture of Proteins**; Saw Yen Ow; Malinda Salim; Phillip C Wright; *The University of Sheffield, Sheffield, UK*

MP 007 **Improved iTRAQ & TMT Quantification on an LTQ Orbitrap Equipped with a New Type of HCD Fragmentation Cell**; Peter Pichler[1]; Thomas Köcher[2]; Johann Holzmann[2]; Michael Schutzbier[2]; Goran Mitulovic[3]; Thomas Moehring[4]; Karl Mechtler[2]; Gustav Ammerer[1,5]; *[1]Christian Doppler Laboratory for Proteome Analysis, Vienna, Austria; [2]IMP, Vienna, Austria; [3]IMBA Inst. of Mol. Biotech., Vienna, Austria; [4]Thermo Fisher Scientific, Bremen, Germany; [5]University of Vienna, Vienna, Austria*

MP 008 **Quantitative Proteomic Analysis and Genome Annotation of *Candida albicans* and *Candida glabrata***; Keshava T.S. Prasad[1]; Kumaran Kandasamy[1,2]; Santosh Renuse[1]; Harsh Pawar[1]; Arivusudar Marimuthu[1]; Raghothama Chaerkady[1,2]; Pradip Kumar Acharya[1]; Akhilesh Pandey[2]; *[1]Institute of Bioinformatics,, Bangalore, India; [2]Johns Hopkins University, Baltimore, MD*

MP 009 **Cross-Sample Analysis of MRM-Based Plasma Protein Expression Measurements Key Component of Developing High Quality MRM Assays**; Sean L. Seymour[1]; Leigh Anderson[2]; Christie L Hunter[1]; *[1]Applied Biosystems, Foster City, CA; [2]Plasma Proteome Institute, Washington, DC*

MONDAY POSTERS

MP 010 **Generating Neuropeptide Standard Curve in a Single LC-MS Run by N, N-Dimethyl Amino Acids Tandem Mass Tags**; Feng Xiang; Junhua Wang; Lingjun Li; *University of Wisconsin, Madison, WI*

MP 011 **Automated Solid Phase Sequential Isotope Labeling for Protein Quantitation**; Reinout Raijmakers[1,2]; Paul J. Boersema[1,2]; Shabaz Mohammed[1,2]; Albert J.R. Heck[1,2]; *[1]Utrecht University, Utrecht, Netherlands; [2]Netherlands Proteomics Centre, Utrecht, Netherlands*

MP 012 **A Low Cost, Automated Chemical Derivatization Technique for Relative Proteome Quantification**; Andy Lo; Joel H. Weiner; Liang Li; *University of Alberta, Edmonton, Canada*

MP 013 **A New Technique: Double-Stable-Isotope-Coding (DSIC) for Quantitative Proteomics**; Hong Wang; Chee-Hong Wong; Alice Chin; Jacob Kennedy; Qing Zhang; Samir Hanash; *PHS, Fred Hutchinson Cancer, Seattle, WA*

MP 014 **Targeting and Quantifying the Hydrophobic Peptidome Fraction by High Resolution Multiple Selected Reaction Monitoring (H-mSRM)**; Diana Klingler[2]; Peter Sonderegger[2]; Endre Laczko[1]; *[1]Functional Genomics Center ETHZ UHZ, Zurich, Switzerland; [2]Institute of Biochemistry UZH, Zurich, Switzerland*

MP 015 **Transfer of Optimized Acquisition Parameters between Mass Analyzer Types for Improved Protein Identification and Quantification**; Christine Miller; David Horn; Shripad Torvi; Ning Tang; Keith Waddell; *Agilent Technologies, Santa Clara, CA*

MP 016 **Using High Mass Accuracy to Quantify Targeted Proteins**; Amol Prakash[1]; Gene Ciccimaro[2]; Scott Peterman[2]; Taha Rezai[1]; Bryan Krastins[1]; David Sarracino[1]; Mary F Lopez[1]; *[1]ThermoFisher Scientific, Cambridge, MA; [2]Thermo Fisher, New Jersey, NJ*

MP 017 **Evaluating the Performance Factors of a Targeted Label-Free Protein Quantitation Approach on an Ultra-High Resolution API-Qq-TOF**; Wolfgang Jabs; Markus Lubeck; Marina Behrens; Carsten Baessmann; *Bruker Daltonik GmbH, 28359 Bremen, Germany*

MP 018 **Data-Independent Tandem Mass Spectrometry Acquisition for Label-Free Peptide/Protein Quantification**; Alexander Scherl[1]; Jean-charles Sanchez[1]; Judith Nicholson[2]; Ted Hupp[2]; *[1]University of Geneva, Geneva, Switzerland; [2]University of Edinburgh, Edinburgh, UK*

MP 019 **Accurate Label-Free Quantitation of Proteins by UPLC/MSE Using Replicates**; Chong-Feng Xu; Thomas A. Neubert; *NYU Langone Medical Center, New York, NY*

MP 020 **Unexpected Decrease of Internal Standard Signals in Quantitative MALDI-TOF Mass Spectrometry**; Norman H.L. Chiu; Walter B. Wilson; *University of North Carolina at Greensboro, Greensboro, NC*

MP 021 **Evaluation of Label-Free Relative Protein Quantification by Protein Standard Mixtures**; Andrej Vasilj[1]; Andrej Shevchenko[2]; Marc Gentzel[3]; *[1]MPI-Cell Biology and Genetic, Dresden, Germany; [2]MP of Mol Cell Biology, Dresden, Germany; [3]MPI-CBG, Dresden, Germany*

MP 022 **Detection and Quantification of a Novel Plant Pathogen Defense Protein Mannitol Dehydrogenase from LC/MS^{E} Datasets**; Kevin Blackburn; Fang-yi Cheng; John D. Williamson; Michael B. Goshe; *NC State University, Raleigh, NC*

MP 023 **A Label-Free Quantitation Strategy for Personalized Membrane Proteomics Signature in Colorectal Cancer**; Chien-peng Wu[1]; Chia-li Han[1]; Chia-feng Tsai[1]; Chih-wei Chien[2]; Pei-yi Lin[1]; Guei-tian Chen[3]; Err-cheng Chan[3]; Jinn-shiun Chen[4]; Jao-song Yu[3]; Yu-ju Chen[1]; *[1]Institute of Chemistry, Academia Sinica, Taipei, Taiwan; [2]National Tsing Hua University, Hsin Chu, Taiwan; [3]Chang Gung University, Tao Yuan, Taiwan; [4]Chang Gung Memorial Hospital, Tao Yuan, Taiwan*

MP 024 **BDNF-Induced Changes in the Expression of the Translation Machinery In Hippocampal Neurons: Protein Levels and Dendritic mRNA**; Bruno Manadas[1]; Ana Santos[1]; Krisztina Szabadfi[1]; João Gomes[1]; Spiros D. Garbis[2]; Michael Fountoulakis[2]; Carlos B Duarte[1]; *[1]Center for Neuroscience and Cell Biology, Cantanhede, Portugal; [2]B.R.F.A.A., Athens, Greece*

MP 025 **Data-Independent Relative Quantification of Salt Stress-Induced Membrane Protein Abundance Changes in *Arabidopsis thaliana* Using Label-Free GeLC/MS^{E}.**; Uma Kota; Kevin Blackburn; Steven D. Clouse; Michael B. Goshe; *North Carolina State University, Raleigh, NC*

MP 026 **A Rapid Label-Free Proteomics Survey of Immortalization in Cultured Human Breast Epithelial Cells**; Rui Miguel Mamede Branca; Virginia Pearce; Laszlo Prokai; *University of North Texas Health Science Center, Fort Worth, TX*

MP 027 **Development of Robust Label-Free Proteomics for Determination of Changes in UV Induced DNA Damage.**; Bei Zhao; George F. Heine; Jeffrey D. Parvin; Michael A. Freitas; *Ohio State University, Columbus, OH*

MP 028 **Relative Quantitation by Label-Free Techniques and Targeted Mass Spectrometry of Brain Endothelial Cell Proteins Upon Challenge with a Fungal Pathogen**; Richard A. Eigenheer[1]; Kiem Vu[1]; Babette B. Weksler[2]; Angie Gelli[1]; Brett S. Phinney[1]; *[1]UC Davis, Davis, CA; [2]Cornell University, Ithica, NY*

MP 029 **Validation of RNAi Protein Knockdown Using Targeted Proteomics**; Daniela Tomazela; Gennifer Merrihew; Geoff Findlay; Veronika Glukhova; Frances Mao; Willie Swanson; Ray Monnat Jr; Michael J. Maccoss; *University of Washington, Seattle, WA*

MP 030 **Monitoring Proteomes of Transgenic Peanuts Engineered for Reduced Allergen Content by Using Linear Trap Quadrupole and Triple Quadrupole Mass Spectrometry**; Severin E. Stevenson[1]; Ye Chu[2]; Peggy Ozias-Akins[2]; Jay J. Thelen[1]; *[1]UM Biochem-Proteomics, Columbia, MO; [2]University of Georgia-Tifton, Tifton, GA*

MP 031 **GeLC-Multiple Reaction Monitoring Mass Spectrometry of Membrane Expression of Cystic Fibrosis Transmembrane Conductance Regulator**; Alexis Ramos; Hui Jiang; Xudong Yao; *Department of Chemistry, University of Connecticut, Storrs, CT*

MP 032 **Identification of Biomarkers for Diabetic Retinopathy by Multiple Reaction Monitoring**; Kyunggon Kim[1]; Jiyoung Yu[1]; Kyong Soo Park[2]; Hyeong Gon Yu[3]; In-Jin Jang[4]; Youngsoo Kim[1]; *[1]Dept. of Biomedical Sciences, College of Medicine, Seoul Nat'l Univ, Seoul, South Korea; [2]Dept. of Internal Medicine, College of Medicine, Seoul Nat'l Univ, Seoul, South Korea; [3]Dept. of Ophthalmology, College of Medicine, Seoul Nat'l Univ, Seoul, South Korea; [4]Dept. of*

Pharmacology, College of Medicine, Seoul Nat'l Univ, Seoul, South Korea

BIOINFORMATICS: QUANTITATION, 033 - 065

MP 033 **Quantitative Analysis Methods in Proteomics**; Ashoka D. Polpitiya; Weijun Qian; Vladislav A Petyuk; Gordon Anderson; Richard D. Smith; *Pacific Northwest National Lab, Richland, WA*

MP 034 **Automatic Computational Protein Co-Regulation Screening for Quantitative Mass Spectrometry Experiments**; Marc Kirchner[1,2]; Bernhard Y Renard[2,3]; Ullrich Koethe[2]; Judith AJ Steen[1]; Hanno Steen[1]; Fred A Hamprecht[2,3]; *[1]Harvard Medical School / Children's Hospital, Boston, MA; [2]University of Heidelberg, Heidelberg, Germany; [3]Children's Hospital Boston, Boston, MA*

MP 035 **Shared Peptides in Mass Spectrometry Based Protein Quantification**; Banu Dost[1]; Nuno Bandeira[2]; Vineet Bafna[3]; *[1]University of California, San Diego, La Jolla, CA; [2]University of California,, La Jolla, CA; [3]Univ. Cal. San Diego, San Diego, CA*

MP 036 **Identifying and Quantifying Isoforms and Homologues**; Johannes PC Vissers[1]; Richard R Sprenger[2]; Lennart Martens[3]; Scott Geromanos[1]; Jim Langridge[1]; *[1]Waters Corporation, Manchester, UK; [2]Department of Medical Biochemistry, AMC, Amsterdam, Netherlands; [3]EMBL European Bioinformatics Institute, Hinxton, UK*

MP 037 **Automated, XIC Based Protein Quantitation of Comparative Low-Resolution 2D/LC Shotgun Experiments within the Elucidator System.**; Eberhard Durr[1]; Peter Askovich[2]; Lori C Stansberry[1]; Mark A Miller[1]; Loren D Schultz[1]; Joseph G Joyce[1]; *[1]Merck & Co, West Point, PA; [2]2 Rosetta Biosoftware, Seattle, WA*

MP 038 **Mathematical Modelling of Dynamic Exclusion to Optimize Protein and Spectral Counts in MudPIT**; Ying Zhang; Zhihui Wen; Laurence Florens; Michael Washburn; *Stowers Institute for Medical Research, Kansas City, MO*

MP 039 **Algorithms for Label-Free Protein Quantification Across Hundreds of LC-MS Data Sets**; Zia Khan; Joshua Bloom; Benjamin Garcia; Mona Singh; Leonid Kruglyak; *Princeton University, Princeton, NJ*

MP 040 **Assessing Reproducibility of Label-Free Proteomics Platforms Using a Large Rat Sera Study: A Comparison of Microspray and Nanospray**; Xiaofeng Guo[1]; Vasant Marur[1]; Neil Russell[1]; Matthew J Sniatynski[1]; Michael Anthanas[2]; Bruce Kristal[1,3]; *[1]Brigham and Women's Hospital, Boston, MA; [2]VAST Scientific, Cambridge, MA; [3]Harvard Medical School, Boston, MA*

MP 041 **Evaluation of Label Free Differential Mass Spectrometry to Detect Low Level Proteins in Unfractionated Complex Mixture**; Sheeno Thyparambil; Shweta S Chavan; Veronica MacLeod; Rick Edmondson; *Univ Arkansas Med Sci., Little Rock, AR*

MP 042 **Peptide Normalization Increases Sensitivity of Label-Free Quantification of Proteins**; Richard LeDuc; Jeffery Hiken; Henry W. Rohrs; Monica Bessler; R. Reid Townsend; *Washington University, St. Louis, MO*

MP 043 **New Algorithm for Label-Free Protein Quantification**; Weiwu Chen[1]; Baozhen Shan[1]; Eric Bonneil[2]; Janine Voyer[1]; Gilles Lajoie[3]; Pierre Thibault[2]; Bin Ma[4]; *[1]Bioinformatics Solutions Inc., Waterloo, ON; [2]Univ.of Montreal, Montreal, QC; [3]University ofWestern Ontario, London, ON; [4]University of Waterloo, Waterloo, Canada*

MP 044 **Novel Label-Free Quantitation Algorithms to Analyze Large Numbers of Proteome/Metabolome Samples**; Ken Aoshima[1,2]; Satoshi Tanaka[1,2]; Tatsuji Nakamura[1,2]; Hideki Watanabe[1]; Khin Than Myint[1,2]; Junro Kuromitsu[1]; Yoshiya Oda[1,2]; *[1]Eisai Co., Ltd, Ibaraki, Japan; [2]CREST, Saitama, Japan*

MP 045 **Evaluation of Relative Quantitation in Proteomics with Label-Free Methods**; Bernd Roschitzki[1,2]; Bertan Gerrits[2]; Christian Panse[2,]; Jonas Grossmann[2,]; Simon Barkow-Oesterreicher[2,]; Ralph Schlapbach[2]; *[1]University of Zurich, Zurich, Switzerland; [2]ETH Zurich FGCZ, Zurich, Switzerland*

MP 046 **Label Free Proteomics: Utilizing the Computational Proteomic Analysis System for Relative Protein Quantitation**; Lewis C Jackson; Mark Lovell; Bert C. Lynn; *University of Kentucky, Lexington, KY*

MP 047 **Identification Of Mosquito Salivary Gland Proteins and Determination of Parasite Infection**; Marcus Macht[1]; Aditya P. Dash[2]; Hebeler Romano[1]; Arun Sharma[2]; *[1]Bruker Daltonics GmbH, Bremen, Germany; [2]National Institute for Malaria Research, New Delhi, India*

MP 048 **Label-Free Differential Analysis: An Iterative Approach to Increased Coverage, Improved Statistics and Results**; Michael Athanas[1]; Michael J. Maccoss[2]; Amol Prakash[3]; Lukas Kall[2]; Daniela Tomazela[2]; Brendan Maclean[2]; Taha Rezai[3]; Bryan Krastins[3]; David Sarracino[3]; Scott Peterman[4]; Mary F Lopez[3]; *[1]VAST Scientific, Cambridge, MA; [2]University of Washington, Seattle, WA; [3]ThermoFisher Scientific, Cambridge, MA; [4]ThermoFisher Scientific, Somerset, NJ*

MP 049 **Comparative Analysis of Paired Samples from Distinct Proteomics Mixtures Using CRAWDAD**; Eric Rynes[1]; Greg L. Finney[1]; Daniela Tomazela[1]; F. Sessions Cole[2]; Aaron Hamvas[2]; Michael J. MacCoss[1]; *[1]Dept. of Genome Sciences, University of Washington, Seattle, WA; [2]Dept. of Pediatrics, Washington University, St. Louis, MO*

MP 050 **Utilization of High-Accuracy FTICR-MS Data in Protein Quantitation Experiments**; Martin Strohalm[1,2]; Petr Novak[1]; Petr Pompach[1]; Petr Man[1]; Daniel Kavan[1]; Matthias Witt[3]; Pert Dzubak[4]; Marian Hajduch[4]; Vladimir Havlicek[1,4]; *[1]Institute of Microbiology, Prague, Czech Republic; [2]Institute of Chemical Technology, Prague, Czech Republic; [3]Bruker Daltonik GmbH, Bremen, Germany; [4]Palacky University, Olomouc, Czech Republic*

MP 051 **MassComp-Q: A Comprehensive Quantitation Software Tool for Stable Isotope Labeling and Label-Free Quantitative Proteomics**; Chih-Chiang Tsou; Ting-Yi Sung; Wen-Lian Hsu; *Institute of Information Science, Academia Sinica, Taipei, Taiwan*

MP 052 **A Computational Method for Improved Quantitation Accuracy of Differentially 18O/16O Labeled Peptides Exhibiting Variable Rate of 18O Incorporation**; Xiaoying Ye[1]; Brian Luke[1]; Donald Johann[2]; Thorkell Andresson[1]; Timothy D. Veenstra[1]; Josip Blonder[1]; *[1]SAIC-Frederick Inc., Frederick, MD; [2]NIH, Bethesda, MD*

MP 053 **Quantitative Approach to Proteome Analysis of Human Body Fluids Based on AMT Tags and Isotopic Labeling**; Igor Popov[1,2]; Ilya A Agron[2,3]; Alexey Kononikhin[2]; Dmitry Avtonomov[2,3]; Oxana Trifonova[4]; Irina Larina[4]; Eugene Nikolaev[1,2]; *[1]Institute*

for Energy Problems of Chemical Physics, Moscow, Russia; [2]Emanuel Institute of Biochemical Physics RAS, Moscow, Russia; [3]Ins. for Biomedical Chem. Rus. Acad. Med.Sciences, Moscow, Russia; [4]Institute for Biomedical Problems RAS, Moscow, Russia

MP 054 **Algorithm for Quantification of Stable Isotope Labeled Peptides**; Yingxin Zhao; Sigmund Haidecher; Ronald Tilton; Larry Denner; Jonathan Starkey; Rovshan Sadygov; *University of Texas, Galveston, TX*

MP 055 **High-Throughput Measurement of Protein Turnover in Plants Using Stable Isotope Labeling Coupled with LC-MS/MS Analysis**; Wen-Ping Chen[1]; Xiao-Yuan Yang[1,4]; Adrian D. Hegeman[1,4]; Aaron K. Rendahl[2]; Sanford Weisberg[2]; Thomas F. McGowan[3]; William M. Gray[4]; Jerry D. Cohen[1]; *[1]Dept. Horticultural Science -U of MN, Saint Paul, MN; [2]School of Statistics - U of MN, Saint Paul, MN; [3]Center for Mass Spectrometry and Proteomics - U of MN, Saint Paul, MN; [4]Dept. Plant Biology - U of Minnesota, Saint Paul, MN*

MP 056 **SILAC Quantification with PEAKS to a Depth of 3000 Proteins from a Double Knockout GSK-3 of Mouse Embryonic Stem Cells**; Chris Hughes[1]; Brad Doble[3]; Lei Xin[2]; Clark Chen[2]; Baozhen Shan[2]; Bin Ma[4]; Gilles Lajoie[1]; *[1]University of Western Ontario, London, ON; [2]Bioinformatic Solutions Inc., Waterloo, ON; [3]McMaster University, Hamilton, ON; [4]University of Waterloo, Waterloo, ON*

MP 057 **Automatic Quantification of 16/18O Labeled LC/MS Data;** Anna Kreshuk[1]; Marc Kirchner[1]; Bernhard Y. Renard[1]; Dominic Winter[2]; Hanno Steen[3]; Judith A. J. Steen[3]; Wolf D. Lehmann[2]; Fred A. Hamprecht[1]; *[1]University of Heidelberg, Heidelberg, Germany; [2]German Cancer Research Center, Heidelberg, Germany; [3]Harvard Medical School/Children's Hospital Boston, Boston, MA*

MP 058 **Quantitation across Multiple iTRAQ Samples Using Scaffold Q+**; Charles E Roberts[1]; Jason Nunes[1]; Brian C. Searle[1]; *[1]Proteome Software, Portland, OR*

MP 059 **Mathematical Modeling and Assessment of Quantitation Following Abundant Protein Depletion Using Hexapeptide Beads and iTRAQ**; John H. Schwacke; Lashanda Waller; Daniel R. Knapp; *Medical University of South Carolina, Charleston, SC*

MP 060 **Improved Technique for Automated Analysis of iTRAQ Data Using LTQ-Orbitrap**; Getiria I. Onsongo; Susan K. Van Riper; Kofi P. Adragni; Ebbing De Jong; Matthew D. Stone; Sricharan Bandhakavi; Baolin Wu; John V. Carlis; Timothy J. Griffin; *University of Minnesota, Minneapolis, MN*

MP 061 **A Bioinformatic Tool for Detailed Interrogation of Multiple iTRAQ Datasets**; Erika P Parkinson[1]; Andrew Garrow[2]; Paul J Skipp[1]; Maja Aleksic[2]; Andrew White[2]; Geraldine Clough[1]; Daniel J Scott[2]; C. David O'Connor[1]; *[1]University of Southampton, Southampton, UK; [2]Safety & Environmental Assurance Centre, Unilever, Sharnbrook, UK*

MP 062 **Templated Proteogenomics: A Novel Method for Monoclonal Antibody Sequencing**; Natalie E Castellana[1]; Victoria Pham[2]; David Arnott[2]; Jennie Lill[2]; Vineet Bafna[1]; *[1]UCSD, La Jolla, CA; [2]Genentech, Inc., S. San Francisco, CA*

MP 063 **Development of a Reliable and Efficient Genome Annotation Pipeline Using Proteomic Mass Spectrometry Data**; Markus Brosch; Tim Hubbard; Jyoti Choudhary; *Wellcome Trust Sanger Instit, Cambridge, UK*

MP 064 **Assigning Proteins Identified from Tissues to Cells Using Publicly Available Gene Chip Data**; Kenneth Parker; *BG-Medicine, Waltham, MA*

MP 065 **Formulation of a MySQL Database and Query Toolset to Extract Complex Metabolic Information from a Natural Microbial Consortia.;** Nathan C. Verberkmoes[1]; Brian Dill[1]; Brian Thomas[2]; Denise Schmoyer[1]; Manesh Shah[1]; Vincent Denef[2]; Paul Wilmes[2]; Patricia Carey[1]; Steve Singer[3]; Korin Wheeler[3]; Michael Thelen[3]; Robert Hettich[1]; *[1]Oak Ridge National Lab, Oak Ridge, TN; [2]University of California, Berkeley, Berkeley, CA; [3]Lawrence Livermore National Laboratory, Livermore, CA*

PROTEOMICS: BIOMARKER DISCOVERY, 066 - 097

MP 066 **Markers of Ovarian Endometrioid Cancer Using a Genetically Engineered Mouse Model and Pathway Analysis**; David M. Lubman; Hyeyeung Kim; Rong Wu; Kathleen Cho; David Misek; *University of Michigan, Ann Arbor, MI*

MP 067 **Protein Composition of Liver Cyst Fluid from the BALB/c-cpk/+ Mouse Model of Autosomal Recessive Polycystic Kidney Disease (ARPKD)**; Xianyin Lai[1]; Bonnie L. Blazer-Yost[1,2]; Vincent H. Gattone II[1]; Monalisa N. Muchatuta[2]; Frank A. Witzmann[1]; *[1]Indiana University School of Medicine, Indianapolis, IN; [2]Indiana University Purdue University at Indianapolis, Indianapolis, IN*

MP 068 **Proteomic Analysis of Differentiation Factors: Retinal Ganglion Cell Line Differentiated by Co-Culture with Non-Pigmented Ciliary Epithelium Cell Secreted Proteins**; Ming-Hui Yang[1]; Shiang-Bin Jong[2]; Jen-Taie Shiea[1]; Yu-Chang Tyan[2]; *[1]National Sun Yat-Sen Univ., Kaohsiung, Taiwan; [2]Kaohsiung Medical University, Kaohsiung, Taiwan*

MP 069 **Biomarker Discovery by Stable Isotope Labeling of Mouse Models**; Michaela D Filiou; Yaoyang Zhang; Birgit Bisle; Elisabeth Frank; Melanie S Kessler; Boris Hambsch; Stefan Reckow; Katrin Haegler; Giuseppina Maccarrone; Rainer Landgraf; Christoph W Turck; *Max Planck Institute of Psychiatry, Munich, Germany*

MP 070 **Identification of Novel Urinary Biomarkers of Renal Obstruction Using Temporal Quantitative Proteomics**; Ali R. Vaezzadeh[1,2]; Andrew Briscoe[2]; Lee Dicker[3]; Oliver Hoffman[3]; Winston Hyde[3]; Hanno Steen[1,2]; Richard S. Lee[1,2]; *[1]Harvard Medical School, Boston, MA; [2]Children's Hospital Boston, Boston, MA; [3]Harvard School of Public Health, Boston, MA*

MP 071 **Label-Free Quantitative Studies of Pancreatic Cancer Stem Cells**; Lan Dai[1]; David M. Lubman[1]; *[1]University of Michigan, Ann Arbor, MI*

MP 072 **Proteomic analysis of Tumor Necrosis Factor-Alpha Resistant Human Breast Cancer Cells Reveals a MEK5/Erk5-Mediated Epithelial-Mesenchymal Transition Phenotype**; Changhua Zhou[1]; Ashley Nitchke[2]; Wei Xiong[2]; Qiang Zhang[1]; Yan Tang[2]; Michael Bloch[2]; Steven Elliott[2]; Yun Zhu[2]; Lindsey Bazzone[2]; David Yu[2]; Christopher B. Weldon[2]; John A. McLachlan[2]; Rachel Schiff[2]; Babara S. Beckman[2]; Thomas Wiese[1]; Kenneth P. Nephew[2]; Bin Shan[2]; Matthew Burow[2]; Guangdi Wang[1]; *[1]Xavier University of Louisiana, New Orleans, LA; [2]Tulane University School of Medicine, New Orleans, LA*

MP 073 **Withdrawn**

MP 074 **Comparative Proteomic Analysis of Liver Cancer Stem Cells**; Sheng-Ta Tsai[1]; Chia-Ning Shen[1]; Chih-Chiang Tsou[2]; Wan-Yu Mao[1]; Wei-Chao Chang[1]; Wen-

Lian Hsu[2]; Chung-Hsuan Chen[1]; [1]*Genomics Research Center, Academia Sinica, Taipei, Taiwan;* [2]*Institute of Information Science, Academia Sinica, Taipei, Taiwan*

MP 075 **Determining the Origin of Estradiol-Reactive Vitelline Envelope Protein Fragments in Female Rainbow Trout Using MALDI-TOF-MS and MS/MS**; Kimberly Salinas[1]; Sherry Vickery[1]; Candice Lavelle[2]; Michael Hemmer[1]; [1]*U.S. EPA, Gulf Breeze, FL;* [2]*U.S. EPA-Student Services Contractor, Gulf Breeze, FL*

MP 076 **Analysis of Synovial Lavage and Plasma from Identical Twins to Identify Osteoarthritis Biomarkers;** Haihong Zhou[1]; Joseph Menetski[1]; Hua Lin[2]; Shanhua Lin[2]; Christopher Becker[2]; Xuemei Zhao[1]; Stephen Oakley[3]; Tim Spector[3]; Suzanne Mandala[1]; Ronald Hendrickson[1]; [1]*Merck & Co., Inc., Rahway, NJ;* [2]*PPD Biomarker Discovery Sciences, Menlo Park, CA;* [3]*St. Thomas' Hospital, King's College London, London, UK*

MP 077 **Urinary Biomarker for Benign Prostatic Hyperplasia - Discovery Using MALDI-TOF-Based Biostatistics Combined with LC-ESI/MS/MS-Based Stable-Isotope Labeling**; Shu-Hui Chen[1]; Hong-Lin Cheng[1]; Bing-Yuan Ou[1]; Hung-Jen Huang[1]; Nan-Haw Chow[1]; Yen-Wen Chen[2]; [1]*National Cheng Kung University, Tainan, Taiwan;* [2]*National Central University, Chuang-Li, Taiwan*

MP 078 **Proteomic Analysis to Understanding a Retinoid-Hypersensitive Embryonal Carcinoma Cell Mutant**; Qishan Lin; Jinghua Zhu; Paulette McCormick; *University at Albany, Rensselaer, NY*

MP 079 **Systematic Evaluation of Immobilized pH Gradient-Isoelectric Focusing (IPG-IEF) for Salivary Biomarker Discovery**; Jonathan L. Bundy[1]; Michael Gardner[1]; Megan Rowland[2]; James Stephenson[1]; [1]*Research Triangle Institute, Rtp, NC;* [2]*RTI International, Cary, NC*

MP 080 **Comparison of Ultrastructure and Protein Composition of Planktonic and Biofilm Stages of Non-Typeable Haemophilus Influenzae**; James Kerwin; Siva Wu; Paul Webster; *House Ear Institute, Los Angeles, CA*

MP 081 **Comparison of Tumour and Normal Endometrial Samples by LC-MS/MS Using an Iterative Exclusion List Approach**; Sebastien Voisin[1]; Leroi Desouza[1]; Olga Krakovska[1]; Alexander D. Romaschin[2]; Terence J Colgan[3]; K W Michael Siu[1]; [1]*York University, Toronto, Canada;* [2]*St Michael's Hospital, Toronto, Canada;* [3]*Mt Sinai Hospital, Toronto, Canada*

MP 082 **Urinary Glycoprotein Biomarker Discovery for Human Bladder Cancer Using Multi-Lectin Affinity Chromatography and LC-MS/MS**; Na Yang[1]; Shun Feng[1]; Huy Vuong[1]; Steve Goodison[2]; Charles J. Rosser[2]; Fan Xiang[3]; David M. Lubman[1]; [1]*University of Michigan, Ann Arbor, MI;* [2]*University of Florida, Jacksonville, FL;* [3]*Shimadzu Biotech, Pleasanton, CA*

MP 083 **Discovery of G-Quadruplex DNA Binding Proteins Using MALDI-MS and LC/MS**; Yuexi Wang; Linda McGown; *Rensselaer Polytechnic Institute, Troy, NY*

MP 084 **Optimization of Glycopeptide Capture for Biomarker Discovery in Human Plasma and Cerebrospinal Fluid**; Frode Berven[1,2]; Rushdy Ahmad[2]; Rune J Ulvik[1]; Steven A. Carr[2]; [1]*University of Bergen, Bergen, Norway;* [2]*Broad Institute, Cambridge, MA*

MP 085 **Proteomics and Protein Network Studies of Metastasis in Human Breast Cancer**; Yashu Liu[1]; Jintang He[1]; Xiaolei Xie[1]; Steve Goodison[2]; David M. Lubman[1]; [1]*University of Michigan, Ann Arbor, MI;* [2]*University of Florida, Jacksonville, FL*

MP 086 **Identification of Differentially Spiked Proteins from Un-Depleted and Un-Fractionated Human Plasma**; Jose E. Meza[1]; Steven C. Hall[2]; H. Ewa Witkowska[2]; Susan J. Fisher[2]; [1]*Agilent Technologies, Santa Clara, CA;* [2]*UCSF MS Core Facility, San Francisco, CA*

MP 087 **Serum Biomarker Discovery of Alzheimer-Related Peptides in Presymptomatic Patients by Means of 2D Protein and Peptide Separation on Monolithic Columns**; Linda IJsselstijn[1]; Deborah Kronenberg[1]; Remco Swart[2]; Peter J. Koudstaal[1]; Peter A. E. Sillevis Smitt[1]; Monique M. B. Breteler[1]; Theo M. Luider[1]; [1]*Erasmus University Medical Center, Rotterdam, The Netherlands;* [2]*Dionex Benelux B.V., Amsterdam, The Netherlands*

MP 088 **Discovery of Novel Colorectal Cancer Biomarkers in Dissected Colorectal Epithelia and their targeted Verification in Plasma.**; Silvia Surinova[1]; Marta Dziechciarková[2]; Andreas Panagiotidis[1]; Matej Skrovina[3]; Bruno Domon[1]; Marián Hajdúch[2]; Ruedi Aebersold[1,4]; [1]*Institute of Molecular Systems Biology (ETHZ), Zurich, Switzerland;* [2]*Palacký University and University Hospital, Olomouc, Czech Republic;* [3]*J.G.Mendel Oncology Centre, Novy Jicin, Czech Republic;* [4]*Institute for Systems Biology, Seattle, WA*

MP 089 **Multiplex Longitudinal Proteomic Profiling of Human Sera in the Study of the Pathogenesis of Type-1 Diabetes**; Robert Moulder[1]; Waltteri Hosia[2]; Olli Simell[3]; Riitta Lahesmaa[1]; [1]*Turku Centre for Biotechnology, Turku, Finland;* [2]*Karolinska Institute, Stockholm, Sweden;* [3]*Faculty of Medicine, University of Turku, Turku, Finland*

MP 090 **Differential Proteome Profiling Using iTRAQ in Microalbuminuric and Normoalbuminuric Type 2 Diabetic Patients**; Hopil Min[1]; Yeonjung Kim[1]; Yunhyi Ku[2]; Ji Yoon Lee[3]; Kyong Soo Park[2]; Youngsoo Kim[1]; [1]*Dept. of Biomedical Sciences, College of Medicine, Seoul Nat'l Univ, Seoul, South Korea;* [2]*Dept. of Internal Medicine, College of Medicine, Seoul Nat'l Univ, Seoul, South Korea;* [3]*National Instrumentation Center for Environmental, Seoul Nat'l Univ, Seoul, South Korea*

MP 091 **Profiling the Post-Translational Modifications of Human Serum Albumin**; Christine Jelinek[1]; Rebekah Gundry[2]; Jessica E. Mott[1]; Robert O'meally[1]; Jennifer Van Eyk[2]; Robert J. Cotter[1]; [1]*Johns Hopkins School of Medicine, Baltimore, MD;* [2]*Johns Hopkins University, Baltimore, MD*

MP 092 **Identification of *in vitro* Modified Lipoproteins Using MALDI Tandem Mass Spectrometry and a Reduced Proteins Database Approach.**; Omar Belgacem[1]; Helen Montgomery[2]; Matthew Openshaw[1]; Wu Zidian[1]; Sobal Grazyna[3]; Gerald Stubiger[4]; [1]*Shimadzu Biotech, Manchester, UK;* [2]*Shimadzu, Koichi Tanaka MS Research laboratory, Manchester, UK;* [3]*Department of Nuclear Medicine, Medical University, Vienna, Austria;* [4]*Department of Vascular Biology Thrombosis Research, Vienna, Austria*

MP 093 **NanoLC-MS/MS Analysis of Urinary Biomarkers for Chronic Graft-Versus-Host Disease**; Michel Boutin[1]; Imran Ahmad[2]; Nathalie Lachapelle[2]; Claude Rondeau[2]; Jean Roy[2]; Pierre Thibault[1]; [1]*IRIC, University of Montreal, Montréal, Canada;* [2]*Blood and Marrow Transplant Program, HMR, Montréal, Canada*

MP 094 **Identifying Differentially Regulated Proteins as Markers for Colorectal Neoplasia.**; Vikram Palamalai;

Jonathan J Harrington; Douglas Mahoney; Ann L Oberg; H. Robert Bergen, Iii; David A Ahlquist; *Mayo Clinic College of Medicine, Rochester, MN*

MP 095 **HIV-Infected Patients with Neurocognitive Impairments: Proteomic Fingerprints of Serum/Plasma and CSF.**; Jayme Wiederin[1]; Fenghai Duan[3]; Wojciech Rozek[2]; Pawel Ciborowski[1]; *[1]University of Nebraska Medical Center, Omaha, NE; [2]National Veterinary Research Instritue, Pulawy, Poland; [3]Brown University, Providence, RI*

MP 096 **Label-Free Proteomic Profiling of D-Serine-Induced Toxicity Biomarkers in Rat Urine**; Lining Qi; John J. Schlager; Pavel Shiyanov; *Wright Patterson Air Force Research Laboratory, Dayton, OH*

MP 097 **Identification of Binding Partners in Eukaryotic Translation Initiation Factors -RNA Binding Protein Complex.;** David Shahbazian; Nahum Sonnenberg; Bernard F. Gibbs; *McGill University, Montreal, Canada*

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MP 098 **Comparing the Collisional-Induced Dissociation Spectra of Various Triglyceride Adduct Ions Formed via Electrospray**; Dong Zheng; Jason J. Evans; *University of Massachusetts Boston, Boston, MA*

MP 099 **Discrimination among Geometrical Isomers of Linolenic Acid Methyl Ester Using Low Energy Electron Ionization Mass Spectrometry and Chemometrics**; Diako Ebrahimi Mohammadi; Leila Hejazi; Michael Guilhaus; David B. Hibbert; *The University of New South Wales, Sydney, Australia*

MP 100 **Determination of the Composition of Fatty Acid Mixtures Using GC × FI-MS: A Comprehensive Two-Dimensional Separation Approach**; Leila Hejazi; Diako Ebrahimi; Michael Guilhaus; David B. Hibbert; *The University of New South Wales, Sydney, Australia*

MP 101 **Maximizing the Detection of Complex Hydrophobic Lipids (e.g. triglycerides): Optimizing Ionization Efficiency and Chromatographic Standard Nanoscale Separations.**; David A. Weil; Michael Woodman; *Agilent Technologies, Schaumburg, IL*

MP 102 **Singlet Oxygen Cycloadducts of Hydroperoxy Dienes Fragment to γ-Hydroxy Alkenals; A Reaction that is Promoted by Vitamin E**; Xiaodong Gu; Wujuan Zhang; Jaewoo Choi; Wei Li; Xi Chen; James Laird; Robert G. Salomon; *Case Western Reserve Univ., Cleveland, OH*

MP 103 **Structure Characterization of Glycosphingolipids in Human Milk**; Ying Zhou[1]; David S. Newburg[2]; Catherine E. Costello[1]; *[1]Boston University School of Medicine, Boston, MA; [2]Mass General Hospital Harvard Medical School, Boston, MA*

MP 104 **Chloro-Nitration of Biomembrane Lipids: Arachidonic and Linoleic Acids**; Srinivas Chakravartula; Archana Marathi; Michael Balazy; *New York Medical College, Valhalla, NY*

MP 105 **A New and Universal Product Ion Nomenclature for Low- and High-Energy CID of Sodiated Glycerophospholipid Precursor Ions**; Ernst Pittenauer[1]; Robert Mistrik[2]; Guenter Allmaier[3]; *[1]Vienna University of Technology, Vienna, Austria; [2]HighChem, Ltd., Bratislava, Slovakia; [3]Vienna Univ of Technology, Vienna, Austria*

MP 106 **Analysis of Fatty Acid Methyl Esters Using the High Throughput LDTD Source Coupled to the LTQ Orbitrap Mass Spectrometer**; Josee Champagne[1]; André Vachereau[3]; Sylvain Letarte[4]; Denis Faubert[1]; Pierre Picard[2]; *[1]IRCM, Montreal, Canada; [2]Phytronix Technologies, Inc., Quebec, QC; [3]Dinotech Inc., Roxboro, Canada; [4]Phytronix Technologies, Blainville, QC*

MP 107 **Automated Lipid A structure Hypotheses Generated by STALA: A Computational Tool to Interpret Lipid A Tandem Mass Spectra**; Ying Sonia Ting[1]; Scott A. Shaffer[1]; Jace W. Jones[1]; Wailap Ng[2]; Robert K. Ernst[3]; David R. Goodlett[1]; *[1]University of Washington, Seattle, WA; [2]National Yang Ming University, Taipei, TAIWAN; [3]University of Maryland, Baltimore, MD*

MP 108 **Regiospecific Analysis of Triacylglycerols Using High Performance Liquid Chromatography/Electrospray Ionization Tandem Mass Spectrometry of Sodiated adduCts**; Lisandra Cubero Herrera[1]; Karen M. Glenn[1]; Michael A. Potvin[2]; Jaroslav A. Kralovec[2]; Jeremy E. Melanson[1]; *[1]NRC Institute for Marine Biosciences, Halifax, Canada; [2]Ocean Nutrition Canada, Halifax, Canada*

MP 109 **Characterization of Cardiolipin Molecular Species by Reversed-Phase Ion Pair High-Performance Liquid Chromatography-Mass Spectrometry**; Charles Hoppel; Paul Minkler; *Case Western Reserve Univ., Cleveland, OH*

MP 110 **Structure to Function: Characterization of the Phosphorylation Pattern of *Yersinia pestis* Lipid A**; Jace W. Jones[1]; Adeline M Hajjar[1]; Robert K. Ernst[2]; David R. Goodlett[1]; Frantisek Turecek[1]; *[1]University of Washington, Seattle, WA; [2]University of Maryland-Baltimore, Baltimore, MD*

MP 111 **LC MS/IMS/MS of Chondroitin Sulfate Mixtures to Characterize Isomeric Forms**; Roy Martin[1]; Hui Wei[1]; Joshua S. Sharp[2]; *[1]Waters Corporation, Beverly, MA; [2]University of Georgia, Athens, GA*

MP 112 **Fast Sample Preparation for Sensitive Analysis of *Helicobacter pylori* Lipid A: Single Colony Analysis and Discovery of an Unusual Structure**; Jianjun Li; Ping Zhou; Vandana Chandan; Xin Liu; Kenneth H.N. Chan; Eleonora Altman; *National Research Council, Ottawa, Canada*

PROTEOMICS: BIOMARKER ASSAYS, 113 - 130

MP 113 **From Discovery to Validation: Rheumatoid Arthritis Serum Protein Biomarkers by Multiple Reaction Monitoring (MRM)**; Shanhua Lin; Hua Lin; Jing Wang; Ted Jones; Chris Becker; *PPD Biomarker Discovery Sciences, Menlo Park, CA*

MP 114 **Quantification of Preterm Birth Biomarkers by LC-MRM/MS in Human Cervicovaginal Fluid Samples**; Sumit J. Shah; Kenneth H. Yu; Vineet Sangar; Samuel I. Parry; Ian A. Blair; *University of Pennsylvania, Philadelphia, PA*

MP 115 **Simultaneous Analysis of Multiple Cerebrospinal Fluid Biomarkers for Alzheimer's Disease**; Yong Seok Choi; Kelvin H. Lee; *University of Delaware, Newark, DE*

MP 116 **Absolute Quantification of Oxidative Modifications on apoA-I Protein by Stable Isotope Dilution LC-MRM/MS Assays**; Kannan Rangiah; Eugene F. Ciccimaro; Ioannis Parastatidis; Harry Ischiropoulos; Muredach P Reilly; Sumit J Shah; Ian A Blair; *University of Pennsylvania, Philadelphia, PA*

MP 117 **Proteomic Survey of Hydrolytic Enzymes and Their Natural Inhibitors in Infant Stool**; Karine Bagramyan; Teresa Hong; Markus Kalkum; *City of Hope, Duarte, CA*

MP 118 **A Strategy for Rapid Validation of Candidate Cancer Serological Biomarkers Using Label-Free Multiple Reaction Monitoring**; Hsin-Yao Tang; Lynn A. Beer;

Huan Wang; Won-A Joo; Tony Chang-Wong; David W. Speicher; *The Wistar Institute, Philadelphia, PA*

MP 119 **MRM for Oral Cancer Biomarker Validation in Saliva: Inherent Challenges, Solutions and Methods Development**; Ebbing De Jong[1]; Hongwei Xie[2]; Getiria I Onsongo[1]; John V Carlis[1]; Nelson L Rhodus[1]; Frank G Ondrey[1]; Tim Griffin[1]; *[1]University of Minnesota, Minneapolis, MN; [2]Waters Corporation, Milford, MA*

MP 120 **iMALDI: A Targeted Proteomics Approach to the Differentiation of EGFR and its Isoforms**; Brinda Shah; Christoph H. Borchers; *UVic Genome BC Proteomics Centre, Victoria, BC*

MP 121 **Verification of Alzheimer's Disease (AD) Progression Markers with Targeted Proteomics**; Weixun Wang; Fanyu Meng; Katie Southwick; Jun Man; Yi Du; Kai Zhou; Nathan Yates; Ronald Hendrickson; *Merck & Co. Inc., Rahway, NJ*

MP 122 **Development of Quality Assurance/Quality Control Specifications for Robust SRM-Based Assays: Increasing Reproducibility from Laboratory to Laboratory**; Scott Peterman[1]; Reiko Kiyonami[1]; Bruno Domon[2]; *[1]ThermoFisher Scientific, San Jose, CA; [2]ETH Zurich, Zurich, Switzerland*

MP 123 **Development of a Multiplexed SRM Assay for Protein Biomarkers of Osteoarthritis**; Michael J. Ford[1]; Bryan Krastins[2]; David Lee[3]; Reuben Gobezie[4]; David Sarracino[2]; Taha Rezai[2]; Amol Parakash[2]; Richard C. Jones[1]; Mary F Lopez[2]; Ruth A. Vanbogelen[1]; Michael R. Pisano[1]; *[1]NextGen Sciences, Ann Arbor, MI; [2]ThermoFisher BRIMS, Cambridge, MA; [3]Harvard Medical School, Boston, MA; [4]Case Western University, Cleveland, OH*

MP 124 **Multiplexed MRM Assay for the Detection of Prostate Cancer.**; Anastasia K. Yocum[1,2]; Rong Zhao[1,2]; Arul M. Chinnaiyan[1,2]; *[1]University of Michigan, Ann Arbor, MI; [2]Michigan Center for Translational Pathology, Ann Arbor, MI*

MP 125 **The Discovery and Evaluation of Candidate Markers of Alzheimer's Disease Using Tandem Mass Tags and SRM Mass Spectrometry**; Darragh O'Brien[1]; Andreas Guentert[2]; Karsten Kuhn[3]; Peter Schulz-knappe[3]; Helen Byers[1]; James Campbell[1]; Simon Lovestone[2]; Malcolm Ward[1]; *[1]Proteome Sciences PLC, London, UK; [2]Institute of Psychiatry, London, UK; [3]Proteome Sciences R&D, Frankfurt/ Main, Germany*

MP 126 **Multiple Reaction Monitoring Cubed (MRM3) : A New Method for Protein Quantification in Crude Serum at Low Nanogram/mL Level**; Fortin Tanguy[1]; Arnaud Salvador[2]; Jean-philippe Charrier[1]; Christof E. Lenz[3]; Florence Bettsworth[1]; Geneviève Choquet-Kastylevsky[1]; Jérôme Lemoine[2]; *[1]BIOMERIEUX, Marcy L'etoile, France; [2]Université de Lyon, Lyon 1, Lyon, France; [3]Applied Biosystems Germany, Darmstadt, Germany*

MP 127 **Application of MRM and mTRAQ™ Labeling to the Verification Process of Candidate Biomarkers Discovered by Cleavable ICAT® Reagent**; Un-Beom Kang[1]; Younghee Ahn[1]; Kyunggon Kim[4]; Jong Won Lee[4]; Yong-Hak Kim[2]; Byunghee Shin[5]; Sanghwa Kim[5]; Joon Kim[3]; Myeong-Hee Yu[2]; Youngsoo Kim[4]; Dong-Young Noh[4]; Cheolju Lee[1]; *[1]Life Sciences Division, KIST, Seoul, South Korea; [2]Functional Proteomics Center, KIST, Seoul, South Korea; [3]Korea University, Seoul, South Korea; [4]College of Medicine, Seoul National University, Seoul, South Korea; [5]Applied Biosystems, Seoul, South Korea*

MP 128 **Isoelectric Point Based Signal Suppression in MALDI-TOF MS to Identify Cancer Biomarkers Including HMGB1 from Human Tissue and Serum**; L.J. Sparvero[1]; Shelly A. Kucherer[2]; Michael E. DeVera[1]; Herbert J. Zeh[1]; Michael T. Lotze[1]; Andrew A. Amoscato[1]; *[1]University of Pittsburgh, Pittsburgh, PA; [2]Carnegie Mellon University, Pittsburgh, PA*

MP 129 **Discovery, Verification and Multi-Technique Assay of a New Serum Protein Biomarker of Ovarian Cancer Tumor Burden**; Paul Russo[1]; Mark M. Ross[1]; Weidong Zhou[1]; Francesco Meani[1]; Lance Liotta[1]; Emanuel Petricoin[1]; Mary Lopez[3]; Taha Rezai[3]; Bin Wei[2]; Jennifer Edwards[2]; Shelley Hoover[2]; Paul Goldsmith[2]; Gregory Alvord[2]; Octavio Quinones[2]; Elizabeth Spehalski[2]; Mark Simpson[2]; *[1]George Mason University, Manassas, VA; [2]National Cancer Institute, Bethesda, MD; [3]Thermo BRIMS, Cambridge, MA*

MP 130 **A LC/MS/MRM Method for Insulin, Glucagon, Amylin Isoforms and GLP-1 Isoforms**; Amy Lu; Albert B Seymour; Ru Wei; *Pfizer RTC, Cambridge, MA*

PROTEOMICS: NEW APPROACHES, 131 - 154

MP 131 **Top-Down Proteomics on a Chromatographic Time Scale Using a Q-TOF MS: Combining MS, MS/MS and Pseudo-MS3 Analyses.**; Robert A. Everley; Judith J. A. Steen; Hanno Steen; *Harvard Medical School/Children's Hospital Boston, Boston, MA*

MP 132 **Application of Agarose Gel Electrophoresis for Top-Down Protein Analysis**; Emiko Yamauchi; Yoshiya Oda; *Eisai Co. Ltd., Tsukuba, Ibaraki, Japan*

MP 133 **Intact Protein Separation Using Alkaline Reversed Phase Chromatography for Proteomics**; Hiroyuki Katayama; Yoshiya Oda; *Eisai Co., Ltd., Tsukuba Ibaraki, Japan*

MP 134 **Investigating the Apoptotic Proteome of Jurkat Cells Using Top Down Proteomics**; Dorothy Ahlf; Haylee Thomas; Neil L. Kelleher; *University of Illinois, Urbana, IL*

MP 135 **Major Advance for 2D Fractionation of Intact Proteins Prior to Liquid Chromatography Coupled to Ion Trap-Fourier Transform Tandem Mass Spectrometry**; John C. Tran; Cong Wu; John Kellie; Ji Eun Lee; Adaikkalam Vellaichamy; Ken Durbin; Adam Catherman; Neil L. Kelleher; *University of Illinois at Urbana-Champaign, Urbana, IL*

MP 136 **Applying Reverse Electron Transfer Dissociation in the Mapping of Post-Translational Modifications in IDE and Tau Related to Alzheimer's Disease**; Malwina A. Huzarska[1]; Michael Easterling[2]; Desmond Kaplan[2]; Malcolm A. Leissring[3]; Nicolas Polfer[1]; *[1]University of Florida, Gainesville, FL; [2]Bruker Daltonics, Inc., Billerica, MA; [3]Mayo Clinic, Jacksonville, FL*

MP 137 **Screening and Identification of Protein Mixture at One Time by Capillary LC/MALDI-TOF with Screening MALDI Plate**; Junho Kim[1]; Jongyeob Jeon[3]; Miyoung Ha[2,3]; Yangsun Kim[2,3]; *[1]Department of Chemistry, Sangji University, Wonju, Korea; [2]Hudson Surface Technology, Inc., Newark, NJ; [3]Applied Surface Technologly, Inc., Suwon, Korea*

MP 138 **A New Approach for Accurate Mass Top-Down Sequencing of Intact Proteins/Toxins Using High Resolution Ion-Trap TOF Mass Spectrometry**; Christopher Nixon[1]; Jesse Hines[2]; Timothy R. Croley[1]; *[1]Commonwealth of Virginia, DCLS, Richmond, VA; [2]Shimadzu Scientific Instruments, Research Triangle Park, NC*

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MP 139 **Top-Down PIITA Analysis and Bottom-Up PAcIFIC Analysis of Alpha Synuclein Isoforms**; Shu-Hua Chen; Jianpeng Zhang; Elizabeth Nguyen; Alexandre Panchaud; Yihsuan Tsai; Scott A. Shaffer; Jing Zhang; David R. Goodlett; *University of Washington, Seattle, WA*

MP 140 **Unifying Fluorescence Microscopy and Mass Spectrometry for Studying Protein Complexes in Cells**; Changhui Deng; Andrew Krutchinsky; *UCSF, San Francisco, CA*

MP 141 **In-Depth, Comprehensive Mapping of the Human Seminal Plasma Proteome by a Novel, Iterative LC-MS/MS/Database Search Workflow**; Claire Dauly[1]; Antoine D. Rolland[2]; Martin Hornshaw[1]; Régis Lavigne[3]; Charles G. Pineau[2,3]; *[1]Thermo Fisher Scientific, Courtaboeuf Cedex, France; [2]Inserm U625, Rennes, France; [3]Proteomics Core Facility OUEST-genopole®, Rennes, France*

MP 142 **MALDI TOF/TOF Data Acquisition Strategy that Minimizes MS/MS Acquisition Time While Maintaining High Quality Data and Increasing Depth of Coverage.**; Kathleen Lewis[1]; Aaron Booy[2]; Sean L. Seymour[1]; Christie L Hunter[1]; *[1]Applied Biosystems, Oakland, CA; [2]MDS Analytical Technologies, Concord, ON*

MP 143 **Comparison and Evaluation of Different Acquisition Parameters in LTQ-FT and LTQ-Orbitrap Mass Spectrometers to Improve Protein Identification Rates**; Anastasia Kalli[1]; Geoffrey Smith[1]; John Lloyd[2]; Sonja Hess[1]; *[1]CalTech, Pasadena, CA; [2]NIH/NIDDK, Germantown, MD*

MP 144 **A Data-Dependent Method to Increase Protein Coverage of Cell Lysates without Additional Instrument Time**; Michael J. Huddleston; Roland S. Annan; *GlaxoSmithKline, King of Prussia, PA*

MP 145 **Comparison of Gas Phase Fraction, Precursor Ion Exclusion and On-Line SCX Separation on Limited Amount Proteome Samples Analysis**; Wei Chen; *University of British Columbia, Vancouver, Canada*

MP 146 **Generating Products of All Ions Using a High Speed and High Sensitivity Experimental Trap-TOF.**; Stephen A Tate[1]; Nic Bloomfield[2]; Igor Chernushevich[3]; Alexandre Loboda[3]; *[1]MDS Sciex, Concord, Canada; [2]MDS Analytical Tech- Sciex, Concord, ON; [3]MDS Analytical Technologies, Concord, ON*

MP 147 **Improved Sampling of complex Mixtures Using Data-Independent Acquisition on an Ion Trap Mass Spectrometer Equipped with an Ion Funnel**; Jesse D. Canterbury; Scott A. Shaffer; Gennifer E. Merrihew; David R. Goodlett; Michael J. Maccoss; *University of Washington, Seattle, WA*

MP 148 **Using High Resolution Ion Maps as an Alternative to Low Resolution MRM for Validating Proteins in Complex Matrices**; Scott Geromanos; Marc V. Gorenstein; Jim Langridge; *Waters Corporation, Milford, MA*

MP 149 **Data-Independent (PAcIFIC) Direct Infusion Tandem Mass Spectrometry: A Time Advantaged Peptide Identification Strategy Using an Electrodynamic Ion Funnel**; Scott A. Shaffer; Shuhua Chen; Alexandre Panchaud; Jesse D. Canterbury; Jing Zhang; Michael J. Maccoss; David R. Goodlett; *University of Washington, Seattle, WA*

MP 150 **Workflow for Maximizing Proteome Coverage Using CID and ETD**; Martin Zeller; Bernard Delanghe; Torsten Ueckert; Thomas Moehring; *Thermo Fisher Scientific, Bremen, Germany*

MP 151 **Increased Sequence Coverage in Complex Protein Digests by Consecutive, Targeted LC-MSMS Runs with Both CID and ETD**; Felix Salinas[1]; Andrea Schneider[2]; Markus Lubeck[3]; Reinaldo Almeida[4]; Carsten Baessmann[3]; *[1]Bruker Daltonics, Inc., Bastrop, TX; [2]Bruker Daltonics, Bremen, Germany; [3]Bruker Daltonik GmbH, Bremen, Germany; [4]Advion, Arnsberg, Germany*

MP 152 **Practical Advantage of Negative Ion Mode MALDI: Alternative Way to Improve Protein Identification for Peptide Mass Fingerprinting**; Tomoyuki Oe; Mao Suzuki; Takao Sanaki; Seon Hwa Lee; Takaaki Goto; *Tohoku University, Sendai, Japan*

MP 153 **In-Source Atmospheric Pressure - Electron Capture Dissociation (AP-ECD): Applicability for the Study of Post-Translational Modifications on Peptides**; Jason Rogalski; Damon Robb; Michael Blades; Juergen Kast; *University of British Columbia, Vancouver, BC*

MP 154 **Intermediate Pressure MALDI-FTMS for Determination of Relative Phosphorylation Rates in the Mouse Aryl Hydrocarbon Receptor (AhR) by Protein Kinase A**; Alan Friedman[1]; Michael Easterling[2]; Brent Kobielush[1]; Thomas Gasiewicz[1]; *[1]University of Rochester Medical Center, Rochester, NY; [2]Bruker Daltonics, Inc., Billerica, MA*

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MP 155 **Identification of Pigments Precursors in Garlic Greening by LCMS-IT-TOF System**; Jing Dong[1]; Dan Hu[2]; Leren Wan[1]; Yuki Hashi[1]; Guanghua Zhao[2]; *[1]Shimadzu International Trading(Shanghai)Co., Limit, Beijing, China; [2]China Agricultural University, Beijing, China*

MP 156 **Ultra High Mass Resolution and Mass Accuracy Measurement and Multistage MS on Structural Elucidation of Trace Level Pharmaceutical Impurities**; Wendy Zhong[1]; Jiong Yang[1]; Michael Easterling[2]; *[1]Schering-Plough, Summit, NJ; [2]Bruker Daltonics, Inc., Billerica, MA*

MP 157 **Using Iso-LCMS for Impurity Identification Directly from a Non-Volatile Mobile Phase Buffer by LCMS Linear Ion Trap Technology**; Jeffrey M. Selenka; Thomas Leitzinger; Cynthia Sanderson; *PPD, Middleton, WI*

MP 158 **Determination of Repaglinide in Human Plasma Using Positive Ion ESI-LC/MS/MS**; Hollie Barton; James Waltrip; Song Zhao; William R. Mylott; Bruce Hidy; Rand Jenkins; *PPD, Richmond, VA*

MP 159 **FAIMS for Drug Discovery and Development Using an Ion Trap and a Triple Quadrupole MS.**; Keeley Murphy; Kevin Cook; Julie Horner; James Kapron; Nicholas Duczak, Jr; Mark Harrison; *Thermo Fisher Scientific, San Jose, CA*

MP 160 **Simultaneous Determination of Emtricitabine and Tenofovir in Human Plasma Using Positive Ion ESI-LC/MS/MS**; Moucun Yuan; Laura Nakovich; William R. Mylott; Bruce Hidy; Rand Jenkins; *PPD, Richmond, VA*

MP 161 **Characterization of Degradation Products of a Triazole Antifungal Agent by HR-LC/MS/MS and On-Line H/D Exchange LC/MS in LTQ-Orbitrap Mass Spectrometer**; Ibrahim Daaro; Guodong Chen; Irina Schwartzburg; Birendra Pramanik; *Schering-Plough Research Institute, Kenilworth, NJ*

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MP 162 **CE_{50}: Quantifying Collision Induced Dissociation Energy for Small Molecule Characterization and Identification**; Tzipporah Kertesz[1]; Lowell Hall[2]; Dennis Hill[1]; David Grant[1]; *[1]University of Connecticut, Storrs, CT; [2]Eastern Nazarene College, Quincy, MA*

MP 163 **Comprehensive Two Dimensional Gas Chromatography Combustion Isotope Ratio Mass Spectrometry (GCxGCC-IRMS) for Determination of 13C/12C Ratios of Endogenous Urinary Steroids**; Ying Zhang; Herbert Tobias; Bruce Pan; Gavin Sacks; J Thomas Brenna; *Cornell University, Ithaca, NY*

MP 164 **A New LC-MS/MS Method for Determination of Maleic Acid in Rat Plasma**; Jingguo Hou; Fei Liu; Sheng Wang; Luke Liu; Bibo Xu; *Primera Analytical Solutions Corp., Princeton, NJ*

MP 165 **Determination of Triamcinolone Acetonide in Human Plasma Using Liquid-Liquid Extraction and High-Performance Liquid Chromatography Coupled to Tandem Mass Spectrometry (LC-MS/MS).**; Rafael E. Barrientos-Astigarraga; Paulo A. R. Galvinas; Jane K. Finzi; Maria Fernanda de O. Carrazedo; Yara Popst Armando; Leandro S. C. Barbosa; Olívia C. M. Amorim; Washington M. Silva; *MAGABI Pesquisas Clinicas Farmaceuticas Ltda., São Paulo, Brazil*

MP 166 **High Performance Liquid Chromatography Combined with Multi-Stage Mass Spectrometry Analysis of DNA Adducts of Aristolochic Acids**; Haiyan Gao[1]; Jing Dong[3]; Feng Feng[2]; Leren Wan[3]; Yuki Hashi[3]; Hailin Wang[2]; *[1]Central South University, Changsha, China; [2]Research Center of Eco-enviromental sciences, Beijing, China; [3]Shimadzu International Trading (Shanghai) Co., Ltd, Beijing, China*

MP 167 **Investigations of the Fragmentation of Novel Compounds from the Synthetic Pathway of AstraZeneca Compounds to Facilitate Rapid Characterisation Using ESI-QIT-MS.**; Angelika Galezowska[1]; Mark W. Harrison[2]; G. John Langley[1]; *[1]University of Southampton, Southampton, UK; [2]AstraZeneca, Macclesfield, UK*

MP 168 **Highly Efficient Ionization of Liquid Crystals by Laser Diode Thermal Desorption-Atmospheric Pressure Chemical Ionization (LDTD-APCI)**; Shigeru Sakamoto[1]; Patrice Tremblay[2]; Jim Koers[3]; *[1]Thermo Fisher Scientific K.K., Yokohama, Japan; [2]Phytronix Technologies Inc, Quebec, Canada; [3]Thermo Fisher Scientific, San Jose, CA*

MP 169 **High Throughput MALDI-MRM Analysis of Steroids**; Michal Weinstock[1]; Brian Williamson[1]; Pauline J. Vollmerhaus[2]; Gary Impey[2]; Babu Purkayastha[1]; *[1]Applied Biosystems, Framingham, MA; [2]MDS Analytical Technologies, Concord, ON*

MP 170 **A Combinatorial Approach for Analyzing the MALDI Response of Small Molecules**; Michelle L. Reyzer; Adam Lander; Eliot McKinley; H. Charles Manning; Richard M. Caprioli; *Vanderbilt University, Nashville, TN*

MP 171 **Nanostructured Surfaces Produced by Laser Ablation as Substrates for Metabolome Analysis via Laser Desorption/Ionization Mass Spectrometry**; Andrea Amantonico; Luca Flamigni; Reto Glaus; Joachim Koch; Detlef Günther; Renato Zenobi; *ETH Zurich, Zurich, Switzerland*

MP 172 **Detection and Quantification of PAH Metabolites by Liquid Chromatography Electron Capture Atmospheric Pressure Chemical Ionization/Mass Spectrometry;** Arnaldo Diaz[1]; Stacy Gelhaus[1]; Clementina Mesaros[1]; Ian A. Blair[2]; *[1]UPENN, Philadelphia, PA; [2]Univ. of Penn/SOM/Pharmacol, Philadelphia, PA*

MP 173 **Development of A Novel Liquid Chromatography Electrospray Ionization-Mass Spectrometry Assay to Assess Intramitochondrial Oxidative Stress**; Sankha S Basu; Stacy Gelhaus; Clementina Mesaros; Ian A. Blair; *University of Pennsylvania School of Medicine, Philadelphia, PA*

MP 174 **Identification of an Impurity in Dronabinol in Sesame Oil by APCI-MSn and NMR**; Randy Wilhelm; John E. Johnson; Frank W. Moser; *Covidien, Ltd / Mallinckrodt Pharmaceutical R&D, St. Louis, MO*

MP 175 **Analysis of Cellular Free Aminothiols and Their Disulfides by Stable Isotope Dilution LC-MS**; Stefanie Khartulyari; Clementina Mesaros; Alexander S. Whitehead; Ian A. Blair; *Center for Excellence in Environmental Toxicology, Philadelphia, PA*

MP 176 **Study the Fragmentation of β-Methylamino-L-alanine Derivative**; Tan Guo; *Rice University, Houston, TX*

MP 177 **EI mass Spectral Study of Chemical Weapon Convention related compounds; Alkylhexahydro-1,3,2-Benzodioxaphosphole and Alkyldodecahydrodibenzo [D,G][1,3,6,2]-Trioxaphosphocine (Ganesha)**; Meehir Palit; W. Gary Mallard; Maciej Sliwakowski; *Org. for the Prohibition of Chemical Weapon (OPCW), The Hague, Netherlands*

MP 178 **Coupling of EPR/MS Techniques for Radical Mechanism Elucidation: Application to Biological Thiol Adducts Characterization**; Mathilde Triquigneaux; Beatrice Tuccio; Robert Lauricella; Laurence Charles; *University Aix-Marseille I & III, Marseille Cedex 20, France*

MP 179 **Analysis of Impurities in Temocapril Using Liquid Chromatography/Quadrupole Time-of-Flight Mass Spectrometry**; Ying Ms. Wang; *Agilent Technologies (China), Shanghai, China*

MP 180 **The LC-MS/MS Methods for Evaluating Drug Residues in Animal Residues-Catfish Integrated Farming System**; Tzong-Shan Chin; Chi-Yang Lee; Chang-Tzon Chen; *National Chia-Yi University, Chia-Yi City, Taiwan*

MP 181 **Comparison of Using Different Sample Preparation Methods for Analyzing Chinese Herbal Products by LC-MS/MS**; Lai Chuan Chang; Lai-chuan Chang; *Biotech Total Solutions, Taipei, Taiwan*

MP 182 **Coupling LC-Fluorescence with Tandem Mass Spectrometry for Identifying Modified Amino Acids**; André LeBlanc; Boris Guichard; William Maupillier; Lekha Sleno; *UQAM, Montreal, Canada*

MP 183 **LCMSMS Validation of Palomid 529 in Multiple Species Utilizing Stereoisomer as Internal Standard**; Adlai E Niggebrugge[1]; Michael Callahan[1]; David Sherris[2]; *[1]Charles River Laboratories, Shrewsbury, MA; [2]Paloma Pharmaceuticals Inc, Boston, Ma*

MP 184 **Characterization of Degradation Products of an Adenosine A2A Receptor Antagonist under Stressed Conditions by LC-MS and FT Tandem MS Analysis**; Li-kang Zhang[1]; Birendra Pramanik[2]; *[1]Schering-Plough Research Inst., Kenilworth, NJ; [2]Schering-Plough Research, Kenilworth, NJ*

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MP 186 **New Design of a Compact Fourier-Transform Quadrupole Ion Trap for High Sensitivity Applications**; Alexander Laue; Albrecht Glasmachers; *Universität Wuppertal, Wuppertal, Germany*

MP 187 **Ion-Image Current Detection Method for Fourier Transform Linear Ion Trap**; Houle Wang; David Kennedy; Kerry Nugent; *Michrom BioResources, Inc., Auburn, CA*

MP 188 **Derivation of Analytical Expressions to Define Resonant Ejection from Square and Sinusoidal Wave Ion Traps**; Hideya Koizumi[1]; Eiko Koizumi[2]; William B. Whitten[1]; Peter T. A. Reilly[1]; *[1]Oak Ridge National Laboratory, Oak Ridge, TN; [2]Peace College, Raleigh, NC*

MP 189 **Comparison of Signal Thresholds in Orbitrap and LTQ Mass Spectrometry for the Identification of Peptides and Proteins in Complex Mixtures**; Catherine C L Wong; Daniel Cociorva; Tao Xu; John Yates; *The Scripps Research Institute, La Jolla, CA*

MP 190 **Mars Organic Molecule Analyzer (MOMA): A Miniature Ion Trap Mass Spectrometer for the Detection of Organics on Mars**; Alexander S. Misharin[1]; Andrey N. Vilkov[1]; Timothy J. Cornish[2]; Theresa Evans-Nguyen[3]; Robert J. Cotter[3]; Luann Becker[4]; Vladimir M. Doroshenko[1]; *[1]MassTech Inc., Columbia, MD; [2]JHU/APL, Laurel, MD; [3]Johns Hopkins University School of Medicine, Baltimore, MD; [4]Johns Hopkins University, Baltimore, MD*

MP 191 **Methods to Improve the Extraction Efficiency and Resolution of the Mass Selective Axial Ejection from a Linear Quadrupole Ion Trap**; Michael Guna[1]; Tom Biesenthal[2]; *[1]MDS Analytical Tech, Sciex, Concord, Canada; [2]MDS Analytical Technologies, Concord, ON*

MP 192 **Extension of Dynamic Range via a Fast Scanning, Dual Cell Linear Ion Trap Mass Spectrometer**; Jason D. Russell[1]; David Good[1]; Danielle L. Swaney[1]; Qiangwei Xia[1]; Jae C. Schwartz[2]; George Stafford[2]; John E. P. Syka[2]; Joshua J. Coon[1]; *[1]University of Wisconsin - Madison, Madison, WI; [2]Thermo Fisher Scientific, San Jose, CA*

MP 193 **Efficient Detection for Linear Traps Using a Single Electron Multiplier**; Michael W. Senko[1]; Kevin Hunter[2]; Wayne Sheils[2]; Dick Stresau[2]; *[1]Thermo Fisher Scientific, San Jose, CA; [2]ETP Electron Multipliers, Ermington, Australia*

MP 194 **Implementation of a Progressively Spaced Stacked Ring Ion Guide on a Linear Ion Trap Mass Spectrometer**; Eloy R. Wouters; Maurizio Splendore; Christopher Mullen; Jae C. Schwartz; Michael W. Senko; Jean-Jacques Dunyach; *Thermo Fisher Scientific, San Jose, CA*

MP 195 **Performance Improvements in High Mass Range Modes on a Dual Cell Linear Ion Trap**; Jae C. Schwartz; Dennis M. Taylor; Philip M. Remes; *Thermo Fisher Scientific, San Jose, CA*

MP 196 **Comparison of a Dual Cell Linear Ion Trap with a Four-Fold Symmetric Stretch versus a Two-Fold Symmetric Stretch**; Philip M Remes; Jae C. Schwartz; *Thermo Fisher Scientific, San Jose, CA*

MP 197 **Boundary Element Method for Printed Circuit Board Ion Trap Structure Optimization with the Elimination of Certain Multipole Harmonics**; Chuan-fan Ding[1]; Gong-yu Jiang[1]; Li Ding[2]; *[1]Fudan University, China, Shanghai, China; [2]Shimadzu Research Lab (Shanghai), Shanghai, China*

MP 198 **PCB Ion Trap Mass Spectrometer Coupled with Electrospray Ionization Source**; Gong-yu Jiang[1]; Xiao-xu Li[1]; Chan Luo[1]; Chuan-fan Ding[1]; Li Ding[2]; *[1]Fudan University, China, Shanghai, China; [2]Shimadzu Research Lab (Shanghai), Shanghai, China*

MP 199 **High Precursor Ion Isolation in a Pure Quadrupole Field.**; Roger Giles; Matthew C Gill; *Shimadzu Research Laboratories (Europe) Ltd, Manchester, UK*

MP 200 **None-Resonant Collision Induced Dissociation in a Digital Linear Ion Trap Time-of-Flight Mass Spectrometer.**; Matthew C Gill; Roger Giles; *Shimadzu Research Laboratories (Europe) Ltd, Manchester, UK*

MP 201 **Design and Fabrication of Ceramic Linear Ion Trap with Its Detector**; Hui Mu; Tao Lin; Xiaohui Yang; Junsheng Zhang; Li Ding; *Shimadzu Research Laboratory, Shanghai, China*

MP 202 **Highly Effective Injection Method of MALDI Ions into the Digital Ion Trap**; Kei Kodera; Makoto Hazama; Sadanori Sekiya; Shinichi Iwamoto; Koichi Tanaka; *Shimadzu Corporation, Kyoto, Japan*

MP 203 **Ion Funnel Transmission Increases Number of Protein Identifications in Complex Proteomics Samples**; Brian Stall[1]; Markus Lubeck[2]; Ralf Hartmer[2]; Christoph Gebhardt[2]; Andreas Brekenfeld[2]; Andrea Schneider[2]; *[1]Bruker Daltonics Inc, Billerica, MA; [2]Bruker Daltonik, Bremen, Germany*

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MP 206 **Full 3D Model Calculations of Entrance Fringe Fields and Their Impact on the Acceptance Characteristics of a Quadrupole Mass Filter**; David G. Welkie; *Analytica of Branford, Branford, CT*

MP 207 **Enhanced Performance of Miniature Quadrupole Array Mass Spectrometers**; Kohei Sasai[1,2]; Jun Aoki[1]; Michisato Toyoda[1]; Tetsuo Shimizu[2]; *[1]Osaka University, Toyonaka,Osaka, Japan; [2]Horiba STEC, Kyoto, Japan*

MP 208 **Simulation and Optimization of the Nanoaerosol Mass Spectrometer (NAMS)**; Mark R Pennington; Murray V. Johnston; *University of Delaware, Newark, DE*

MP 209 **Study of Long-Term Signal Stability of Residual Gas Analyzers;** Chang Joon Park; Keu Chan Lee; Jong Rok Ahn; Jin Tae Kim; *Korea Research Institute of Standards and Science, Daejeon, South Korea*

MP 210 **Practical Quadrupole Theory: Resolution and Transmission as a Function of RF Frequency**; Dodge Baluya[2]; Christopher Taormina[3]; Nicolas Polfer[2]; Randy Pedder[1]; *[1]Ardara Technologies L.P., Monroeville, PA;*

[2]University of Florida, Gainesville, FL; [3]Ardara Technologies, Gibsonia, PA

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MP 215 **Profiling of Sphingolipids in Cells and Tissues Treated with Bioactive Compounds by LC-MS/MS;** Lingyun Li; Eva Budman; Alexei Belenky; Kim Alving; Paul Mason; Aharon Cohen; Jim Lillie; Stefan Girgenrath; Mandy Cromwell; Thomas Natoli; John Leonard; Bing Wang; *Genzyme Corp., Waltham, MA*

MP 216 **Suicide Inactivation of 5-Lipoxygenase**; Patrick Hutchins[1]; Robert C. Murphy[2]; [1]Univ of Colorado, Denver, CO; [2]University of Colorado Den, Aurora, CO

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MP 222 **How Sterols Affect the Lipidome of Developing Drosophila Larvae?**; Dominik Schwudke[1]; Maria Carvalho[2]; Ronny Herzog[2]; Suzanne Eaton[2]; Andrej Shevchenko[2]; [1]National Centre for Biological Sciences, Bangalore / Bengaluru, India; [2]MPI-CBG, Dresden, Germany

MP 223 **Distinguishing Artifacts from Answers in MALDI-MS Detection of Cholesterol Oxidation Products**; Kevin M. McAvey; Chanel A. Fortier; Matthew A. Tarr; Richard B. Cole; *University of New Orleans, New Orleans, LA*

MP 224 **Glycolipids Synthesized by the Dental Pathogen *Streptococcus mutans* - Not *Sugar-Free*!**; Larry Sallans; Jenny E. Custer; Bryan D. Goddard; Neil Ford; Stephen F. Macha; Edna S. Kaneshiro; *University of Cincinnati, Cincinnati, OH*

MP 225 **Changes in the Mitochondrial Lipidome as a Function of Alzheimer's Disease Progression**; Michael D. Timmons; Melissa Bradley; Jianquan Wang; Mark A. Lovell; Bert C. Lynn; *University of Kentucky, Lexington, KY*

MP 226 **A Nonenzymatic Route to Lysophosphatidylcholine: Spontaneous Deacylation of oxidatively Damaged Phospholipids**; Jaewoo Choi; Wujuan Zhang; Xiaodong Gu; Xi Chen; Li Hong; James M. Laird; Robert G. Salomon; *Case Western Reserve University, Cleveland, OH*

MP 227 **Glycoxidation: The Role of Aminophospholipids Glycation in Oxidative Stress**; M Rosário Domingues; Cláudia Simões; *University of Aveiro, Aveiro, Portugal*

MP 228 **Mycobacterium Tuberculosis Cytochrome-P450 CYP125 is Important for Host Cholesterol Degradation and Biosynthesis of Lipid Virulence Factors**; Hugues Hugues Ouellet; Shenheng Guan; Eric D. Chow; Jonathan B. Johnston; A.l. Burlingame; Jeffery Cox; Paul R. Ortiz de Montellano; *University of California, San Francisco, CA*

MP 229 **LC-MS Method for Simultaneous Analysis of Multiple Steroid Pathways**; Thomas Griffiths, II; Kara Pearson; William H. Schaefer; *Merck Research Labs, West Point, PA*

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MP 231 **Liquid Microphase Extraction and Controlled Emitter Tip Chemistry-Coupled to Nanospray Mass Spectrometry for Direct Lipid Analysis**; Patrick J. Horn; Anna K. Behrendt; Kent D. Chapman; Guido F. Verbeck; *University of North Texas, Denton, TX*

MP 232 **Improved Identification of Glycerophospholipids Using a Linear Ion Trap Mass Spectrometer (LTQ) with Pulsed Q Collision Induced Dissociation (PQD)**; Tanxi Cai; Jing Li; Peng Xue; Zhengsheng Xie; Ziyou Cui; Linan Shi; Junjie Hou; Xiulan Chen; Peng Wu; Fuquan Yang; *Institute of Biophysics, CAS, Beijing, China*

MP 233 **Mass Spectrometry Approaches to Lipid Profiling in Biological Matrices**; Joelle Onorato; Petia Shipkova; Michael Reily; David Wang-Iverson; *Bristol-Myers Squibb, Princeton, NJ*

MP 234 **A Profiling and Quantification Method with High Sensitivity for Glycosphingolipids**; Hyeyoung Lee[1]; Hyun Joo An[1]; Caroline S. Chu[1]; Larry Lerno[1]; Laura A. Gillies[1]; Rudolf Grimm[2]; Carlito B. Lebrilla[1]; J. Bruce German[1]; [1]University of California, Davis, CA; [2]Agilent Technologies, Santa Clara, CA

MP 235 **Analysis of whole Lipid Extracts Using On-Line High Resolution LC-MS;** Catharina Crone[1]; Eric Genin[2]; Helmut Muenster[1]; [1]Thermo Fisher Scientific, Bremen,

Germany; [2]ThermoFisher Scientific, Courtaboeuf, France

MP 236 **Analysis of Ganglioside Distribution in Mammalian Brain Tissue by Direct Profiling and Micro-Extraction Studies Using MALDI-TOF/MS.**; Benoit Colsch; Alice Delvolve; Shelley N Jackson; Amina S. Woods; *NIDA-IRP, NIH, Baltimore, MD*

MP 237 **Comparing Global and Targeted Lipid and Fatty Acid Shotgun Profiling of Brain Tissue Extracts by NanoESI-Infusion.**; Gary Impey[2]; Brigitte Simons[1]; Eva Duchoslav[1]; Kaisa Koisten[3]; Kim Ekroos[3]; *[1]MDS Analytical Technologies, Concord, Canada; [2]Applied Biosystems, Concord, ON; [3]Zora Biosciences, Espoo, Finland*

MP 238 **Shotgun Lipidomics of PIP and PIP2 in Rat Retina**; Ekaterina S Lobanova[1]; Julio L Sampaio[2]; Polina V Lishko[3]; Vadim Y Arshavsky[1]; Andrej Shevchenko[4]; *[1]Duke Eye Center, Durham, NC; [2]MPI-CBG, Dresden, Germany; [3]Harvard Medical School, Boston, MA; [4]MP of Mol Cell Biology, Dresden, Germany*

MP 239 **Lipidomic Profiling in Human Plasma Utilizing Orbitrap Mass Spectrometer: Improved Quantification and Identification with High Resolution and Accurate Mass Measurements**; Xiang He; Ted Jones; Sophia Chen; Praveen Kumar; Thomas A. Shaler; Hua Lin; Chris Becker; *PPD Biomarker Discovery Sciences, LLC, Menlo Park, CA*

MP 240 **A Software Tool for Species Unrestricted, Instrument –Independent Interpretation of Shotgun Lipidomics Data**; Ronny Herzog[1]; Dominik Schwudke[1,2]; Andrej Shevchenko[3]; *[1]Max Planck Institute CBG, Dresden, Germany; [2]National Centre for Biological Sciences, Tata Inst, Bangalore / Bengaluru, India; [3]MP of Mol Cell Biology, Dresden, Germany*

MP 241 **An LC-EIMS Method for a Rapid Profiling of Free Fatty Acids in Biological Fluids.**; Achille Cappiello; Giorgio Famiglini; Pierangela Palma; Elisabetta Pierini; Veronica Termopoli; Helga Trufelli; *University of Urbino, Urbino, Italy*

MP 242 **Mass Defects in Lipidomics; Strategies for Exploiting High Resolution Mass Spectra from Human Lipid Profiles**; Albert Koulman[1]; Dietrich Volmer[2]; *[1]MRC-HNR, Cambridge, UK; [2]Medical Research Council, Cambridge, UK*

MP 243 **Derivatization for Lipidomics in Very Low Biofluid Sample Volumes: Analysis of Free Fatty Acids, Neutral and Polar Lipids by UHPLC-FTMS**; Ivana Bobeldijk-Pastorova; Raymond Ramaker; Leon Coulier; Elwin Verheij; *TNO Quality of Life, Zeist, Netherlands*

MP 244 **A Merging of Proteomics and Lipidomics: Mass Spectrometric Approaches to Profiling Mammary and Liver Cytoplasmic Lipid Droplets**; Brittany D.M. Hodges; Julie A. Weisz; Christine C. Wu; *University of Colorado School of Medicine, Aurora, CO*

MP 245 **Analysis of Cellular Lipids Using Normal Phase Liquid Chromatography with APPI and ESI Mass Spectrometry**; Anita Brinker; Diana R Johnson; Joseph Dixon; *Rutgers University, New Brunswick, NJ*

MP 246 **A New LC /APCI-MS Method for the Separation and Mass Spectrometric Analysis of Neutral Sphingolipids and Cholesterol**; Hany Farwanah[1]; Jennifer Wirtz[1]; Thomas Kolter[1]; Klaus Raith[2]; Reinhard H. H. Neubert[3]; Konrad Sandhoff[1]; *[1]Universität-Bonn, Bonn, Germany; [2]Landesamt für Verbraucherschutz, Magdeburg, Germany; [3]Universität Halle-Wittenberg, Halle / Saale, Germany*

MP 247 **Analysis of Phosphatidylcholines in Human Plasma by 2D-LC Coupled with FT-ICR-MS and MS/MS**; Qiaohong He; Liang Li; *University of Alberta, Edmonton, Canada*

MP 248 **Reverse-Phase LC/MS Method for Phosphoinositide Analysis in Cancer Cell Lines.**; Arugadoss Devakumar; Roslyn Dillon; Michael Greig; Shubha Bagrodia; *Pfizer Global R & D, San Diego, CA*

MP 249 **Automated On-Column Lipid Extraction and Fractionation for Clinical Lipidomics**; Kai Schuhmann[1]; Dominik Schwudke[2]; Ronny Herzog[1]; Martin Sibum[3]; Andrea Kohn[3]; Stefan R. Bornstein[4]; Andrej Shevchenko[1]; *[1]Max Planck Institute CBG, Dresden, Germany; [2]National Centre for Biological Sciences, Tata Inst, Bangalore / Bengaluru, India; [3]Spark Holland Inc.,, Emmen, Netherlands; [4]Department of Internal Medicine III, TU Dresden, Dresden, Germany*

MP 250 **Enhanced Sensitivity, Selectivity and Speed for Lipidomics Applications**; Roland Geyer[1]; Axel Besa[3]; Uta Ceglarek[2]; *[1]Applied Biosystems Europe, Rotkreuz, Switzerland; [2]Laboratory Medicine, University Hospital, Leipzig, Germany; [3]Applied Biosystems, Darmstadt, Germany*

MP 251 **Phospholipid Analysis by Femtosecond Laser-Induced Ionization/Dissociation Mass Spectrometry (fs-LID MS)**; Scott A. Smith; Christine L. Kalcic; Marcos Dantus; Gavin E. Reid; *Michigan State University, East Lansing, MI*

MP 252 **Accelerating Lipid Profiling of Human Samples for Biomarker Discovery Using UFLC-IT-TOF**; Simon Ashton[1]; Neil J Loftus[1]; Chris Titman[1]; Albert Koulman[2]; *[1]Shimadzu, Manchester, UK; [2]MRC Human Nutrition Research, Cambridge, UK*

MP 253 **UPLC/TOF MS Metabolomic Approach for Profiling Fatty Acid Content in Eggs of Marine Ornamental Species**; John P. Shockcor[1]; Kate Yu[1]; Stephen O'Shea[2]; Jose Castro-perez[1]; Nancy Breen[2]; Michael P. Balogh[1]; *[1]Waters Corporation, Milford, MA; [2]Roger Williams University, Bristol, Rhode Island*

MP 254 **High-Throughput Analysis of (Dihydro)Ceramides and 2-Hydroxyacyl (Dihydro)Ceramides in Biological Materials Using Flow Injection Analysis Coupled with ESI-MS/MS**; Hai Pham Tuan; Diane Butz; Therese Koal; *BIOCRATES Life Sciences AG, Innsbruck, Austria*

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MP 256 **Analysis of Purine and Pyrimidine Bases, Nucleosides, and Nucleotides in Protein Hydrolysates**; Damon Barbacci; *BD, Sparks, MD*

MP 257 **Fast Throughput Liquid Chromatography/Tandem Mass Spectrometry Method for Quantification of Tricarboxylic Acid and High Energy Intermediates**; Stephen Barnes[1]; Antonio Piras[1,2]; D. Ray Moore[1]; *[1]University of Alabama at Birmingham, Birmingham, AL; [2]University of Cagliari, Cagliari, Sardinia, Italy*

MP 258 **Rugged and Reproducible LC/MS/MS Method to Analyze Citalopram and Its Metabolites in Human Plasma using Automated Liquid-Liquid Extraction**;

Yousef Basir; Wence Tong; *Covance Bioanalytical, Indianapolis, IN*

MP 259 ***o,o'*-Dityrosine as an Index of Free Radical Activity in Ageing and Inflammatory Diseases.**; Martin P Bucknall[1]; Anne Poljak[1]; Michael J Davies[2]; Alicia J Jenkins[3]; Perminder Sachdev[1]; Justyna M Czarna Bahl[4]; George A Smythe[1]; *[1]UNSW, Sydney, Australia; [2]The Heart Research Institute, Sydney, Australia; [3]University of Melbourne, Melbourne, Australia; [4]Statens Serum Institute, Kopenhagen, Denmark*

MP 260 **Quantitative Analysis of Fatty Acids and Eicosanoids in Physiological Samples by LC/MS/MS Using Isotope Coded Tags**; Scott B. Daniels; Marjorie Minkoff; Sasi Pillai; Subhakar Dey; Brian Williamson; Babu Purkayastha; *Applied Biosystems, Framingham, MA*

MP 261 **Systematic and Expanded Investigation of High and Unexpected Positive Deviation for QC Samples during GLP Incurred Samples Analysis by LC-MS/MS**; Georges El-Kadissi; Mireille Nohra; Natasha Savoie; Ericka Franco; Véronik Gill; Milton Furtado; Chantal Menard; Mary Carbone; Fabio Garofolo; *Algorithme Pharma Inc., Laval (Montreal), Quebec, Canada*

MP 262 **Development of a New Assay for Evaluating KDO-8-P synthase Inhibitors Using Weak Anion Exchange LC and ESI-MS Detection;** Rong-Fang Gu; Gejing Deng; Elaina Zverina; *AstraZeneca, Waltham, MA*

MP 263 **Measurement of Vitamin B12 in Beverages by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)**; Min Huang; Doug Winters; *Covance, Food and Drug Analysis, Madison, WI*

MP 264 **Metabolic Flux Analysis of the Co-Fermentation of Glucose and Xylose by S. Cerevisiae 424A(LNH-ST) Using Isotope Labeling and LC-SIM-MS**; Amber Jannasch; Elizabeth Casey; Miroslav Sedlak; Wenchu Yang; Nathan S. Mosier; Nancy Ho; Jiri Adamec; *Purdue University, West Lafayette, IN*

MP 265 **Quantitation of Mercapturic Acid Conjugates of 4-Hydroxynonenal and 4-Oxononenal Metabolites in Smokers and Non-Smokers by Electrospray LC-MS/MS**; Heather Kuiper; Brandi Langsdorf; Fred Stevens; *Oregon State University, Corvallis, OR*

MP 266 **Quantification of N-Terminal Valine Ethylation in Human Hemoglobin by Isotope Dilution nanoLC-Nanospray Ionization Tandem Mass Spectrometry**; Wen-peng Lin; Yen-Bor Lee; Hauh-Jyun Candy Chen; *National/ Chung-Cheng University, Chia-yi, Taiwan*

MP 267 **LC/MS/MS Analyses of Collagen from Meat Extract.**; Anna Sylvia Ferrari Marques[1]; Helio Martins-Junior[1]; Jose Luiz Costa[1]; Takeo Sakuma[2]; Daniel Lebre[3]; Robert Ellis[2]; Eladia Almeida[4]; Wison Silva[4]; *[1]Applied Biosystems Inc., Sao Paulo, Brazil; [2]MDS Analytical Technologies, Concord, ON; [3]Applied Biosystems/MDS Sciex, Concord, ON; [4]Bertin Ltda., Lins, SP, Brazil*

MP 268 **Quantification of Clarithromycin in Serum, Bronchoalveolar Lavage Fluid and Lung Tissue Using LC/MS-MS: Influence of Dose Escalation on Mycoplasma Pneumoniae**; Claudia Meek[1,3]; Seth Rutherford[1]; Robert Hardy[2]; Claudia Tagliabue[2,4]; Richard Leff[1,2]; *[1]Texas Tech University Health Sciences Center, Dallas, TX; [2]University of Texas Southwestern Medical Center, Dallas, TX; [3]Children's Medical Center, Dallas, TX; [4]Fondazione IRCCS Policlinico, Mangiagalli e Regina, Milano, Italy*

MP 269 **Endogenous Steroid Profiling of Equine Serum Using Turbulent Flow Chromatography with Tandem Mass Spectrometry**; Benjamin C Moeller[1]; Scott Stanley[1]; *[1]University of California - Davis, Davis, CA*

MP 270 **UHPLC-MS/MS Quantitation of Malonyl Coenzyme A in Mammalian Tissue**; Russell Pickford[1]; Donna Wilks[2]; Elaine Preston[2]; Michael M. Swarbrick[2]; *[1]University of New South Wales, Sydney, Australia; [2]Garvan Institute of Medical Research, Sydney, Australia*

MP 271 **Profiling of Phase-1 Metabolites of Lipid Peroxidation Products in Human THP-1 Monocytes by Electrospray LC/MSMS**; Ralph Reed[1]; Cristobal L. Miranda[1]; Heather Kuiper[1]; Brandi L. Langsdorf[2]; Fred Stevens[1]; *[1]Oregon State University, Corvallis, OR; [2]Linus Pauling Institute, Corvallis, OR*

MP 272 **Establishing a Definitive Method for the Determination of the Anandamide and 2-Arachidonoyl Glycerol in Human Plasma**; Gary A. Schultz[1]; Barry R. Jones[1]; Barry S. Lutzke[2]; Dale A. Campbell[1]; Bradley L. Ackermann[2]; *[1]Advion BioServices, Inc., Ithaca, NY; [2]Eli Lilly & Company, Indianapolis, IN*

MP 273 **Quantitation of Fatty Acids in Breath by Secondary Electrospray Ionization Mass Spectrometry**; Pablo Martinez-Lozano Sinues; *National Research Council, Segrate (MI), Italy*

MP 274 **Development and Validation of a Liquid Chromatography-Tandem Mass Spectrometry for the Simultaneous Determination of B Group Vitamins in Infant Formula**; Joon Hyuk Suh; Byung Kyu Lee; Jeong-Rok Youm; Sang Beom Han; *College of Pharmacy, Chung-Ang University, Seoul, South Korea*

MP 275 **A Simple, Fast LC-MS/MS Method to Assess Glutamate Quantitation in Microdialysate;** Dao M. Tran; Licong Jiang; *Vertex Pharmaceuticals Inc., San Diego, CA*

MP 276 **Isotope Dilution - Matrix-Assisted Laser Desorption Ionization-Time of Flight Mass Spectrometry for the Determination of Serum Thyroid Hormones**; Ming-Hui Yang[1]; Yuh-Shan Su[2]; Shiang-Bin Jong[2]; Yu-Chang Tyan[2]; *[1]National Sun Yat-Sen University, Kaohsiung, Taiwan; [2]Kaohsiung Medical University, Kaohsiung, Taiwan*

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MP 279 **Bioanalytical Methods for Monitoring Relative Changes of Oxylipins from Mouse Plasma**; Richard L. Wong; Baomin Xin; Jing Yang; Timothy Olah; *Bristol-Myers Squibb Company, Lawrenceville, NJ*

MP 280 **A Sensitive and Rugged Method To Measure Endogenous Levels of S-Adenosylmethionine (SAM) and S-Adenosylhomocysteine (SAH) in Biological Samples Using LC-MS/MS**; Suzie Yeh; Sang Na; Rena Zhang; William Bart Emary; *Merck & Co., Inc., West Point, PA*

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MP 284 **Structure Elucidation of Disulfide Bonds in a Rhamnose-Binding Lectin from Salmon Eggs**; Liang Zhao[1]; Ruben T. Almaraz[2]; Fan Xiang[3]; Jerry L. Hedrick[2]; Andreas H. Franz[1]; *[1]University of the Pacific, Stockton, CA; [2]University of California Davis, Davis, CA; [3]Shimadzu Biotech, Pleasanton, CA*

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MP 287 **Top-Down Proteomics Analysis of 2DE Separated Protein Isoforms Using Gel Protein Recovery System and ESI FT-ICR MS**; Christopher Bolcato[1]; John Cardamone[1]; Manimalha Balasubramani[1]; Matthew Powell[2]; Trust Razunguzwa[2]; Reid Asbury[2]; *[1]University of Pittsburgh, Pittsburgh, PA; [2]Protea Biosciences, Morgantown, WV*

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MP 290 **Characterization of Protein Isoforms Using Tandem MS of Intact and On-Line Digested Proteins from a Single Intact Protein HPLC Separation**; Errol W. Robinson; Zhixin Tian; Nikola Tolić; Daniel López Ferrer; Konstantinos Petritis; Joshua N. Adkins; Richard D. Smith; Ljiljana Paša-Tolić; *Pacific Northwest National Laboratory, Richland, WA*

MP 291 **Protein LC-MS with On-Line Fraction Collection, Enzymatic Digestion and Rapid Infusion MS/MS: An Automated Analysis Workflow for Complex Proteomic Samples**; Geoffrey S. Rule[2]; Daniel Eikel[1]; Brigitte Simons[3]; Simon J. Prosser[4]; *[1]AdvionBioSystems, Ithaca, NY; [2]Advion BioSystems, Salt Lake City, UT; [3]MDS Analytical Technologies, Concord, ON; [4]Advion BioSciences, Inc., Ithaca, NY*

MP 292 **Application of an Intact Protein Separation Space for PTM Characterization**; Mark E. McComb; David H. Perlman; Wantao Ying; Giuseppe Infusini; Vivek N. Bhatia; Weiwei Tong; Catherine E. Costello; *Boston University School of Medicine, Boston, MA*

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MP 295 **PTM Finder Based on PEAKS De Novo Sequencing Result**; Lei Xin[1]; Baozhen Shan[2]; Gilles Lajoie[3]; Bin Ma[4]; *[1]CS Dept. of The University of Western Ontario, London, Canada; [2]Bioinformatics Solutions Inc., Waterloo, ON; [3]University ofWestern Ontario, London, ON; [4]University of Waterloo, Waterloo, ON*

MP 296 **Reversible Amine Capture for Selective Detection of Protein N-Termini by Mass Spectrometry**; Juni T Samos[1]; Joseph A. Loo[2]; Rachel O. Loo[2]; *[1]University of California, Los Angeles, Los Angeles, CA; [2]UCLA, Los Angeles, CA*

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MP 305 **A Sensitive Method for the Analysis of Neurosteroids by HPLC-MS-APPI (Atmospheric Pressure Photoionization)**; Farooq Azam; Andre Negahban; Steve E. Unger; *Wyeth Pharmaceuticals, Collegeville, PA*

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MP 308 **Design Modifications Enabling Performance Comparison between the Original and Current Generation Commercially Available Atmospheric Pressure Photoionization (APPI) Sources**; Ross McCulloch[1]; Damon Robb[1]; Michael Blades[2]; *[1]University of British Columbia, Vancouver, Canada; [2]University of British Columb, Vancouver, BC*

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MP 320 **Using Laser-Induced Acoustic Desorption/Electrospray Ionization Mass Spectrometry to Directly Characterize Organic Compounds Separated on Thin-Layer Chromatography Plate**; Sy-Chyi Cheng; Chih-Chiang Chou; Jentaie Shiea; *National Sun Yat-Sen Univ., Kaohsiung, Taiwan*

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MP 324 **Preventing Electrolysis of Analytes in Electrospray Ionization Mass Spectrometry Using a Redox Polymer Coated Emitter**; Emese Peintler-Krivan; Vilmos Kertesz; Gary J. Van Berkel; *Oak Ridge National Laboratory, Oak Ridge, TN*

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MP 326 **Ionization Competitors Extend the Upper Linear Dynamic Range of Electrospray Ionization Mass Spectrometry;** Bilal Bazzi; *UTA, Arlington, TX*

MP 327 **Evaluation of a New Electrospray Ion Source and Interface Combination for Ruggedness and Sensitive in LC-MS/MS**; George Scott[1]; Charles Jolliffe[2]; *[1]Ionics Mass Spectrometry Group, Bolton, ON; [2]IONICS Mass Spec Group, Inc., Bolton, ON*

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MP 338 **On-Line HPLC with H/D Exchange in Liquid Electrospray-Assisted Laser Desorption Ionization Mass Spectrometry for The Analysis of Protein Mixture**; Yi-Tzu Cho[1]; Jingyueh Jeng[2]; Jentaie Shiea[1]; *[1]National Sun Yat-Sen Univ., Kaohsiung, Taiwan; [2]Chia-Nan Univ. of Pharmacy and Science, Tainan, Taiwan*

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MP 341 **Quantitative Analysis Using LC-MS-MS of PGE2, PGE3 and PGD2 in Chicken Ovarian Tissue as Markers of Ovarian Cancer Risk**; Rui Yu[1,2]; Hongmei Cao[1,2]; Yan Zhuge[1,3]; Jo Ann J. Lagman[1,3]; Kristine Ansenberger[1,3]; Cassandra J. Richards[1,3]; Dale B. Hales[1,3]; Richard B. van Breemen[1,2]; *[1]University of Illinois at Chicago, Chicago, IL; [2]Dept. of Medicinal Chemistry and Pharmacognosy, Chicago, IL; [3]Department of Physiology and Biophysics, Chicago, IL*

MP 342 **Quantitation of Risperidone and 9-Hydroxyrisperidone in Human Plasma by Liquid Chromatography and Tandem Mass Spectrometry**; Dunmin Mao; Gina de Boer; Hong Zhang; Rong Yi; Winnie Lui; Amara Pinnawala; Irene Popov; *Cantest, Burnaby, Canada*

MP 343 **A Direct LC/MS/MS Method to Determine the Amount of Ciclopirox Penetrated Across Human Nail Plate *in in vitro* Penetration Studies**; Wei Bu; Xiaoqing Fan; Holly Sexton; Irwin Heyman; *Anacor Pharmaceuticals, Palo Alto, CA*

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MP 348 **Analytical Challenges in the Development and Validation of Column Switching UPLC-MS/MS Methods for the Quantitation of Corticosteroids**; James Creegan[2]; Grace O'Maille[1]; Tianyi Zhang[2]; Rand G. Jenkins[2]; Bruce J. Hidy[2]; Gen Matsuo[1]; Xiaolu Tao[1]; Sudhakar Pai[1]; *[1]Akros Pharma Inc., Princeton, NJ; [2]PPD, Inc., Richmond, VA*

MP 349 **Fast Liquid Chromatography Separation and Multiple Reaction Monitoring Mass Spectrometric Detection of Catecholamines**; Loubna A Hammad[1]; Matthew Neely[2]; Bob Bridge[2]; Yehia Mechref[1]; *[1]Indiana University Biochem Ctr, Bloomington, IN; [2]Dionex Corporation, Bannockburn, IL*

MP 350 **Use of LC/MS to Detect and Identify a Labile Intermediate in the Study of Oxazoline Pro-drug Hydrolysis**; Rong-sheng Yang[1]; Larry Heimark[2]; Rebecca Osterman[1]; Tze-Ming Chan[1]; Birendra Pramanik[3]; *[1]Schering-Plough Research Institute, Kenilworth, NJ; [2]Retired, Bloomfield, NJ; [3]Schering-Plough Research, Kenilworth, NJ*

MP 351 **Validated LC-MS/MS Method for Determination of Alverine and its Hydroxy Metabolite in Human Plasma with Application to a Bioequivalence Study**; Mr. Noel Gomes; Mr Ashutosh Pudage; *Accutest Research Labs, India, Navi Mumbai, India*

MP 352 **Application of a Validated HPLC-ESI-MS Method to Evaluate Degradation of Ziconotide;** Jhoana A. Mendoza; John R. Eyler; *University of Florida, Gainesville, FL*

MP 353 **A High Sensitive and High Throughput LC/MS/MS Method for Determination of Budesonide in Rat Gastrointestinal Tract**; Xiaodong Zhu; *Covance Laboratories, Madison, WI*

MP 354 **Simultaneous Determination of Nucleotide Mono-, Di-, and Triphosphates in Rat Liver Using LC-MS/MS**; Donghui Bao; Phillip A. Furman; Michael J. Sofia; *Pharmasset, Princeton, NJ*

MP 355 **An LC-MS/MS Method for the Quantitation of IDX184 and Its Nucleoside Metabolite in Human Plasma (EDTA)**; Ginny B. James; Jonathan O. Rathe; Chris J. Kafonek; Alan M. Dzerk; Curtis E. Sheldon; Chad J. Briscoe; *MDS Pharma Services, Lincoln, NE*

MP 356 **Development of an LC-MS/MS Method for Measurement of Deuterium Incorporation into DNA**; Jin Wu[1]; Randall Purves[1]; Martine Lamarche[1]; Diane Ethier[1]; Yves Boie[1]; Mark P. Keller[2]; Mary E. Rabaglia[2]; Alan D. Attie[2]; Denis Normandin[1]; Simon Wong[1]; Kevin P. Bateman[1]; *[1]Merck Frosst Canada, Kirkland, Canada; [2]University of Wisconsin-Madison, Madison, WI*

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MP 359 **Dried Blood Spots Assays for Determination of Various Drugs in Whole Blood by LC-MS/MS**; Xiaorong Liang[1]; Glenn Hanson[1]; Tom Addison[1]; Julie Tollefson[1]; Kevin Jones[1]; David M. Bakes[2]; Lee Goodwin[2]; Phillip Turpin[2]; *[1]Covance, Madison, WI; [2]Covance Laboratories Ltd, Harrogate, UK*

MP 360 **Evaluate and Solve an Unusual differential Recovery Problem in Bioanalysis of a Boron-Containing Compound in Mouse Blood**; Ji Zhang; Michael Johnson; Cindy Xia; Mark Qian; *Millennium :The Takeda Oncology Company, Cambridge, MA*

MP 361 **Multi-Class Antibiotic Screening of Honey Using Dual On-line Extraction Columns in Tandem**; Catherine Lafontaine; Yang Shi; Francois A. Espourteille; *Thermo Fisher Scientific, Franklin, MA*

MP 362 **C18-Functionalized Magnetic Nanoparticles as Extraction Sorbent Combined with LC-MS for Analysis of Benzophenones in Urine Sample**; Tzung-Jie Yang; Pei-Cheng Wang; Maw-rong Lee; *National Chung-Hsing University, Taichung, Taiwan*

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MP 372 **Extraction of Melamine from Various Matrices Using Resin-Based Mixed-Mode Cation Exchange SPE and Analysis with LC-MS/MS.**; Lee Williams[1]; Elena Gairloch[2]; Rhys Jones[1]; Helen Lodder[1]; Steve Jordan[1]; Richard Calverley[1]; Claire Desbrow[1]; Steve Plant[1]; Gary Dowthwaite[1]; Joanna Caulfield[1]; *[1]Biotage GB Limited, Cardiff, UK; [2]Biotage, Charlottesville, VA*

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MP 394 **Antibody-Antigen Binding Affinity Measurement Using HD Exchange and Dilution Strategy**; Tingting Tu[1]; Don L. Rempel[1]; Alina Petre[2]; Michael Przybylski[2]; Michael L. Gross[1]; *[1]Washington University in St. Louis, Saint Louis, MO; [2]University of Konstanz, Konstanz, Germany*

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MP 405 **Determination of Clozapine and its Two Metabolites in Rat Plasma and Brain Tissue Using Ultra-Performance Liquid Chromatography/Tandem Mass Spectrometry**; Feng Liang[1]; Alvin V. Terry[2]; Michael G. Bartlett[1]; *[1]University of Georgia, Athens, GA; [2]Medical College of Georgia, Augusta, GA*

MP 406 **Metabolic Stability Study Using Cassette Analysis and Polarity Switching in an Ultra High Performance Liquid Chromatography (UHPLC)-Triple Quadrupole System**; Anabel Fandino[1]; Edgar Naegele[1]; Stephan Buckenmaier[2]; Bernd Glatz[1]; *[1]Agilent Technologies, Santa Clara, CA; [2]Agilent, Waldbronn, Germany*

MP 407 **Quantitative Open Access LC-MS/MS Using QuickQuan and QuickCalc Software.**; John G. Swales; Gary Wilkinson; *Astrazeneca, Macclesfield, UK*

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MP 428 **Application of an LC-Orbitrap Approach to Complete Metabolite Identification in 2 Injections**; Austin Li[2]; Xiang-yu Jiang[1]; Jon Denissen[1]; *[1]Covance, Waunakee, WI; [2]Covance Laboratory, Inc., Sun Prairie, WI*

MP 429 **Comparison of Three High-Throughput Methods for the Simultaneous Measurement of Metabolic Stability and Identification of Metabolites**; Alek N. Dooley; Alexandre Wang; Hua-fen Liu; Elliott Jones; Loren Olson; *Applied Biosystems, Foster City, CA*

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MP 437 **Application of the BioTrove RapidFire™ Ultra-Fast Online SPE-MS/MS System for Compound-Specific Analysis of *in-vitro* ADME Samples**; Anthony Paiva; Andrew Wagner; Xianmei Cai; Ying Li; Janet kolb; John Herbst; Charlie Conway; Harold Weller; Wilson Shou; *Bristol-Myers Squibb, Wallingford, CT*

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MP 439 **A Database of Observed Molecular Weight Changes during Drug Metabolism**; Bill Fitch; Bo Wen; Ludmila Alexandrova; *Roche Palo Alto, Palo Alto, CA*

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MP 442 **High Throughput Identification of Irinotecan Metabolites in Tissue Homogenates Using MSn and a 10 Hz cycle Time Linear iIon Trap**; Maria C. Prieto Conaway[1]; Julie Horner[1]; Yingying Huang[1]; Shousong Cao[2]; Farukh Durrani[2]; Youcef Rustum[2]; Ping Wang[2]; Khin Marlar[2]; A. Latif Kazim[2]; Julian Phillips[1]; *[1]Thermo Fisher Scientific, San Jose, CA; [2]Roswell Park Cancer Institute, Buffalo, NY*

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MP 448 **Performance Advantages Using Micro-LC Columns Packed with Sub-3 µm Particles in LC/MS/MS.**; David Neyer; Remco Van Soest; Steve Hobbs; *Eksigent Technologies, Dublin, CA*

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MP 450 **Rapid Screening of Opiate and Benzodiazepine Drugs in Biological Fluids Using Electrophoretic Fractionation and MALDI Linear Ion Trap Mass Spectrometry**; Lisa Manier[1]; Richard M. Caprioli[2];

[1]Vanderbilt University, Nashville, TN; [2]Vanderbilt Univ Sch of Med, Nashville, TN

MP 451 **Improving the Success Rate Using of "Trap and Elute" Chromatography for High-Throughput LC/MS/MS Bioanalysis**; Hui Zhang; John Janiszewski; Richard Schneider; *Pfizer Inc., Groton, CT*

MP 452 **Drug Metabolite Identification with UPLC-MS Assisted by High Resolution Reconstructed Radiochromatography**; Manfred Zell; Christophe Husser; *F. Hoffmann-La Roche Ltd, Basel, Switzerland*

MP 453 **Development of Two Dimensional Gas Chromatography Time-of-Flight Mass Spectrometry for Differential Metabolomics**; Aiqin Fang[1]; Bing Wang[1,2]; Bogdan Bogdanov[1]; Richard Higashi[1]; Xiang Zhang[1]; *[1]University of Louisville, Louisville, KY; [2]Anhui University of Technology, Ma An Shan, China*

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MP 455 **High Resolution and High Mass Accuracy LC-MS for Hepcidin Quantitation in Human Serum**; Hongyan Li[1]; Mark J Rose[1]; Bradley J. Hart[2]; Seema Sharma[2]; Christopher A James[1]; *[1]Amgen Inc, Thousand Oaks, CA; [2]Thermo Scientific, San Jose, CA*

MP 456 **High Throughput Protein Quantitation Using Multiple Reaction Monitoring**; Ning Tang; Christine Miller; Keith Waddell; *Agilent Technologies, Santa Clara, CA*

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MP 458 **An New Gradient LC-MS/MS System Establishment Optimized for Polypeptide Quantification**; Ryoya Goda; Hiroshi Masumoto; Kenichi Sudo; Nobuhiro Kobayashi; Osamu Okazaki; *Daiichi Sankyo Co., Ltd., Shinagawa-ku, Tokyo, Japan*

MP 459 **Improving Fragmentation Efficiency of TMT Labeled Peptides Using Stepped Higher Energy Collisional Dissociation**; Lihua Jiang; Terry Zhang; Rosa Viner; Allen Zhang; Vlad Zabrouskov; Mark Sanders; *ThermoFisher Scientific, San Jose, CA*

MP 460 **Amino Acid Analysis of Peptides Using Isobaric-Tagged Isotope Dilution LC-MS/MS**; Adrian R Woolfitt[1]; Maria I Solano[1]; Tracie Williams[2]; James L Pirkle[1]; John R. Barr[1]; *[1]CDC, Atlanta, GA; [2]Centers for Disease Control and Prevention, Atlanta, GA*

MP 461 **Analysis of iTraq and mTraq Labeled Amino Acids Using Triple Quadrupole LC-MS/MS**; Barrett R. Smith[1]; Rudy Alvarado[1]; Jack M. Presley[1]; Peter Kent[2]; Kerry Nugent[3]; Brett Phinney[1]; *[1]Univeristy of CA, Davis, Davis, CA; [2]Michrom Bioresources, Auburn, CA; [3]Michrom Bioresources, Inc., Auburn, CA*

MP 462 **Dial-In Precision of Peptide Ratio Determination Down to the Low Percent Range**; Johannes Graumann[1]; Juergen Cox[1]; Yong Zhang[2]; Matthias Mann[1]; *[1]Max-Planck-Institute of Biochemistry, Martinsried, Germany; [2]Beijing Institute of Genomics, Beijing, China*

MP 463 **A Sensitive Method for Quantitating Peptides on a New Orbitrap Mass Spectrometer;** Jie Qian; Gene Ciccimaro; Mark Szewc; *Thermo Scientific, Somerset, NJ*

MP 464 **Development of a Novel Immunoaffinity Capture-Based LC-MS/MS Method for Quantitation of Adrenomedullin in Human Plasma**; Stone D.-h. Shi[1]; Hendrik Neubert[2]; Simon Bergqvist[1]; Ian T James[2]; Michael Greig[1]; Eugenia Kraynov[1]; *[1]Pfizer Global R&D- La Jolla, San Diego, CA; [2]Pfizer Corporation, Sandwich, Kent, UK*

MP 465 **Bioanalysis of Peptides Using On-Line Two-Dimensional Liquid Chromatography**; Ang Liu[2]; Chad E Wujcik[3]; Joseph A Tweed[1]; *[1]Pfizer Inc.,, Groton, CT; [2]Univ. of Illinois at Chicago, Chicago, IL; [3]Monsanto, St. Louis, MO*

MP 466 **HILIC Chromatography is a Superior Alternative to SCX/RP for Peptide Purification.**; Joseph Caruso; Paul Stemmer; *Wayne State University, Detroit, MI*

MP 467 **Quantification of Ion Suppression on Peptides in Complex Mixtures by Electrospray Ionization Mass Spectrometry**; Vincent A. Fusaro; Susan E. Abbatiello; Jacob D. Jaffe; Karl R. Clauser; Steven A. Carr; *Broad Institute of MIT and Harvard, Cambridge, MA*

MP 468 **Preparative Electrophoresis of Peptides and Small Molecules for Quantitative LC/MS/MS Analysis.**; Nghia Chiem; Jay Harkins; Peter Osucha; Chuck Witkowski; Jeremy L. Norris; *Protein Discovery, Inc., Knoxville, TN*

MP 469 **Understanding Hydrophobicity and Limits of Detection for Biologically Relevant Peptides Using the ALiPHAT Method and Electrospray Ionization**; D. Keith Williams, Jr.; Ibrahim D. Bori; Pauline Ondachi; Daniel L. Comins; Jerry L. Whitten; David C. Muddiman; *North Carolina State University, Raleigh, NC*

MP 470 **Development of an Air Amplifier Assisted Protein-Cleavage Isotope Dilution Mass Spectrometry Method for Prostate Specific Antigen in the Nano-Flow Regime**; R. Brent Dixon; D. Keith Williams, Jr.; Alex Sohn; Jack R. Edwards; Thomas A. Dow; David C. Muddiman; *North Carolina State University, Raleigh, NC*

MP 471 **Rapid MRM Assay Development Strategies - Intelligent Software and Acquisition Strategies for Highest Productivity**; Sahana Mollah; Matthew Champion; Christie L Hunter; *Applied Biosystems, Foster City, CA*

MP 472 **Mixed Mode LCMS Methods to Reduce Variability of Response in Highly Selective, Sensitive Bioanalyses for Peptide Therapeutics in Human Plasma**; Erin E. Chambers; *Waters Corporation, Milford, MA*

MP 473 **Using Targeted Charge Separation to Improve Detection Limits in Therapeutic Peptide Quantitation**; J.c. Yves Leblanc[1]; Changtong Hao[2]; J. Larry Campbell[3]; K W Michael Siu[2]; *[1]MDS Analytical Technologies, Concord, On, Canada; [2]York University, Toronto, ON; [3]MDS Analytical Tech, Sciex, Concord, ON*

MP 474 **Highly Sensitive Peptidomics Profiling of Native Plasma Samples by Efficient Tandem Mass Tag Labeling Avoiding Bias and Proteolytic Artifacts**; Hans-Dieter Zucht; Petra Budde; Christian Baumann; Sasa Koncarevic; Karsten Kuhn; Thorsten Prinz; Peter Schulz-Knappe; *Proteome Sciences, Frankfurt, Germany*

MP 475 **Fundamental Studies on the Electrophoretic Enrichment of Peptides in Clinical Samples for Quantification Using nanoLC-MS/MS.**; Gary

Valaskovic[2]; Mike S. Lee[1]; Chuck Witkowski[3]; Jeremy L. Norris[3]; [1]*Milestone Development Services, Newtown, PA;* [2]*New Objective, Inc., Woburn, MA;* [3]*Protein Discovery, Inc., Knoxville, TN*

MP 476 **PQD Ion Trap MS Based Quantitation of Complex Cellular Extracts**; Maria Iuliana Lazar; Ina Hoeschele; Jenny Armenta; *Virginia Bioinformatics Institute, Blacksburg, VA*

MP 477 **Robust and Automated Evaluation of MRM Signals in Quantitative Mass Spectrometry: Detecting Interferences in Peptide Quantitation**; D. R. Mani[1]; Susan E. Abbatiello[2]; Michael Burgess[2]; Hasmik Keshishian[3]; Eric Kuhn[2]; Steven A. Carr[2]; [1]*Broad Institute of MIT, Cambridge, MA;* [2]*Broad Institute, Cambridge, MA;* [3]*Broad Institute of MIT and Harvard, Cambridge, MA*

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MP 478 **Correlation Between Glycan Biomarkers of Human Breast Cancer and a Mouse Model of Metastatic Breast Cancer**; Maria Lorna A. de Leoz[1]; Lawrence J. T. Young[1]; Hyun Joo An[1]; Scott R. Kronewitter[1]; Suzanne Miyamoto[2]; Helen K. Chew[2]; Alexander D. Borowsky[1]; Carlito B. Lebrilla[1]; [1]*University of California, Davis, CA;* [2]*UC Davis Cancer Center, Sacramento, CA*

MP 479 **The *Caenorhabditis elegans* Bacterial Resistant *bus-2* Mutant Reveals a New Class of *O*-glycans and is Deficient in Core-I like *O*-glycans.**; Elizabeth Palaima[1]; Nancy Leymarie[1]; Jonathan Hodgkin[2]; John F Cipollo[1]; Catherine E. Costello[1]; [1]*Boston University School of Medicine, Boston, MA;* [2]*University of Oxford, Oxford, UK*

MP 480 **A Strategy for Glycomic Characterization of Mucins in Human Pancreatic Juice Using Supported Molecular Matrix Electrophoresis and MALDI-TOF MS**; Yu-ki Matsuno[1]; Weijie Dong[1]; Takuro Saito[2]; Mitsukazu Gotoh[2]; Hisashi Narimatsu[1]; Akihiko Kameyama[1]; [1]*Research Center for Medical Glycoscience, AIST, Tsukuba, Japan;* [2]*Fukushima Medical University, Fukushima, Japan*

MP 481 **Profiling Reduced and Permethylated Glycans Derived from Human Blood Serum as Potential Cancer Biomarkers by Chip-Based Reversed-Phase Liquid Chromatography-Mass Spectrometry**; William R Alley; Yehia Mechref; Milos V Novotny; *Indiana University, Bloomington, IN*

MP 482 **Monitoring α2-3- and α2-6-sialylation of Human Serum and Granulocyte Gangliosides by nano-HPLC/ESI-QTOF Mass Spectrometry**; Stephan Kirsch[1]; Jamal Souady[1]; Johannes Müthing[2]; Jasna Peter-Katalinic[1]; Laura Bindila[1]; [1]*Institute of Medical Physics and Biophysics, Münster, Germany;* [2]*Institute of Hygiene, Münster, Germany*

MP 483 **Comparative Mapping of Drosophila Melanogaster Glycome in the Aging Process through Quantitative Permethylation and Stable-Isotope Labeling**; Zhiyu Li; David E. Clemmer; *Indiana University, Bloomington, IN*

MP 484 **N-Glycome Analysis of Membrane Proteins from Intestinal Epithelial Cells**; Milady R. Niñonuevo; Khatereh Motamedchaboki; Caroline Nissan; Lars Bode; *Burnham Institute for Medical Research, La Jolla, CA*

MP 485 **Quantitative Analysis of High Mannose and Sialylated Glycans as Markers for Cancer**; Hyun Joo An[1]; Maria Lorna De Leoz[1]; Scott Kronewitter[1]; Kyle S. Peacock[1]; Jaehan Kim[1]; Jay V. Solnick[1]; Suzanne Miyamoto[2]; Carlito B. Lebrilla[1]; [1]*University of California, Davis, CA;* [2]*UC Davis Cancer Center, Sacramento, CA*

MP 486 **A Highly Sensitive Method for the Analysis of O-Linked Oligosaccharides**; John A. Goetz[1,2]; Milos V. Novotny[1,2]; Yehia Mechref[1,2]; [1]*Indiana University Dept. of Chemistry, Bloomington, IN;* [2]*National Center for Glycomics and Glycoproteomics, Bloomington, IN*

MP 487 **Determination of Linkages of Oligosaccharides Using Closed-Ring 8-aminopyrene-1,3,6-trisulfonate Labeling/Negative Ion Trap Mass Spectrometry.**; Sue-Ting Chen; Guor-Rong Her; *National Taiwan University, Taipei, Taiwan*

MP 488 **Alterations in the Glycomics of Major and Minor Proteins Fractionated from the Serum of Hepatocellular Carcinoma Patients**; Pilsoo Kang[1]; Milan Madera[1]; William R Alley[1]; Radoslav Goldman[2]; Yehia Mechref[1]; Milos V Novotny[1]; [1]*Indiana University, Bloomington, IN;* [2]*Georgetown University, Washington, DC*

MP 489 **The Effects of Various Ionizing Species on the Detection and Fragmentation of Oligosaccharides**; Scott Harrison[1,2]; Geoff A Lane[1]; Mary Blackburn[3]; Karl Fraser[1]; Silas Villas-Boas[2]; Susanne Rasmussen[1]; [1]*AgReasearch, Palmerston North, New Zealand;* [2]*Auckland University, Auckland, New Zealand;* [3]*Thermo Fisher Scientific, Beverly Hills, MI*

MP 490 **A Combination of Proteomic and Glycomic Characterization of Prostate-Specific Antigen Using Chip-Based MALDI-MS**; Yan Li[1]; Lori J. Sokoll[1]; Brian J. Field[2]; Daniel W. Chan[1]; Hui Zhang[1]; [1]*Johns Hopkins University, Baltimore, MD;* [2]*Shimadzu Scientific Instruments, Inc., Columbia, MD*

MP 491 **MALDI and ESI of Oligosaccharides and Their Glycopeptides Conjugates**; Yu-Ling Chang[1]; Sylvain Liao[2]; Wen-Bin Yang[2]; Yuan-Chuan Lee[3]; Chung-Hsuan Chen[1,2]; [1]*Department of Chemistry,National Taiwan University, Taipei, Taiwan;* [2]*Genomics Research Center, Academia Sinica., Taipei, Taiwan;* [3]*Department of Biology, Johns Hopkins University, Baltimore, MD*

MP 492 **A Mass Spectrometry Based Glycomic Approach for Identification of Carbohydrate Dependant Virulence Factors Using Caenorhabditis Elegans as a Surrogate Host**; Md Mizanur Rahman[1]; Jonathan Hodgkin[2]; John F Cipollo[1]; [1]*Food and Drug Administration/CBER, Bethesda, MMD;* [2]*University of Oxford, Oxford, UK*

MP 493 **Electron Detachment Dissociation of Chloride-Adducted Oligosaccharides**; James R. Kornacki; Julie Adamson; Kristina Hakansson; *University of Michigan, Ann Arbor, MI*

MP 494 **Isomer Characterization of N-Linked Glycans from Chicken Ovalbumin by Ion Trap MS**; Jenny Jiao; Hailong Zhang; Vernon N. Reinhold; *The Glycomics Center, University of New Hampshire, Durham, NH*

MP 495 **Characterization of N-Linked Glycans on Glycophorins by Sequential Mass Spectrometry**; David Ashline[1]; Ewa Jaskiewicz[2]; Vernon N. Reinhold[1]; [1]*University of New Hampshire, Lee, NH;* [2]*Ludwik Hirszfeld Inst. of Imm. and Exp. Therapy, Wroclaw, Poland*

MP 496 **Hexose Rearrangements upon Fragmentation of N-Glycopeptides and Reductively Aminated N-Glycans**; Manfred Wuhrer; André M. Deelder; *Leiden University Medical Center, Leiden, The Netherlands*

MP 497 **Ion-Electron Reactions of Sialylated N-Linked Glycans Released from Glycoproteins**; Wen Zhou;

Kristina Hakansson; *University of Michigan, Ann Arbor, MI*

MP 498 **Production and Fragmentation of Negative Ions from Neutral *N*-Linked Glycans Ionized by MALDI Mass Spectrometry for Rapid Structural Identification**; David J. Harvey[1]; Paula Domann[2]; Daniel Spencer[3]; Ian Edwards[4]; Rachel L. Martin[4]; *[1]University of Oxford, Oxford, UK; [2]LGC Ltd., Teddington, UK; [3]Ludger Ltd, Abingdon, UK; [4]Shimadzu Biotech, Manchester, UK*

MP 499 **Characterization of Glycan Structures by Low and High Energy CID**; Steven L. Cohen; Steven H. Seeholzer; *The Children's Hospital of Philadelphia, Philadelphia, PA*

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MP 500 **Arginine Effect in Photodissociation of Charge Tagged Peptides**; Yi He; James P. Reilly; *Indiana University, Bloomington, IN*

MP 501 **Hypochlorous Acid Modifies N-Terminal Disulfide-Bonded Cysteine: Identification of Reaction Pathway by LC-ESI-MS/MS**; Yi Wang[1]; Grady Blacken[1]; Xiaoyun Fu[1,2]; *[1]Puget Sound Blood Center, Seattle, WA; [2]Department of Medicine, University of Washington, Seattle, WA*

MP 502 **Characterization of Methionine Oxidation in a Parathyroid Hormone Formulation Using LC/TOF MS and LC/MS/MS**; Charles Pan; Joseph Valente; Rosario LoBrutto; Jenifer Pickett; Micheal Motto; *Novartis, East Hanover, NJ*

MP 503 **Analysis of Large Peptides by MALDI Using a Linear Quadrupole Ion Trap with Mass Range Extension**; Daniel P. Magparangalan[1]; Timothy J. Garrett[1]; Dieter M. Drexler[2]; Richard A. Yost[1]; *[1]University of Florida, Gainesville, FL; [2]Bristol-Myers Squibb, Wallingford, CT*

MP 504 **Optimized Condition to Capture Peptides (Bradykinin and Buccalin) for Efficient Fractionation of a Peptide/Protein Mixture**; Ven Ney Wong; Gary R. Kinsel; Daniel Dyer; *Southern Illinois University Carbondale, Carbondale, IL*

MP 505 **Online Analysis of Metal-Binding Peptides Using an Ion-Selective Membrane Probe Coupled to ESI-MS TOF**; Juan Astorga-Wells[1,2]; Thomas White[3]; Craig M. Whitehouse[3]; Thorleif Lavold[2]; Hans Jörnvall[1]; *[1]Karolinska Institutet, Stockholm, Sweden; [2]Biomotif AB, Danderyd, Sweden; [3]Analytica of Branford, Branford, CT*

MP 506 **Selective Extraction and Fractionation of Peptides from Multi-Protein Digests Using Polymeric and Dendrimeric Reverse Micelles for MS Analysis**; Andrea Gomez-Escudero; Malar Azagarsamy; Sankaran Thayumanavan; Richard W. Vachet; *University of Massachusetts, Amherst, MA*

MP 507 **Structural Elucidation of Isocyanate-Peptide Adducts Using Tandem Mass Spectrometry**; Justin M. Hettick; Tinashe B. Ruwona; Paul D. Siegel; *NIOSH, Morgantown, WV*

MP 508 **Intrinsic Gas Phase Reactivity Trends of a, b and y Peptide Ions: Effects of Size and Shape.**; Patrícia Verardi Abdelnur[1]; Livia S Eberlin[2]; Marcos N Eberlin[3]; *[1]ThoMSon-Unicamp, Campinas, Brazil; [2]Purdue University, West Lafayette, IN; [3]ThoMSon Lab UNICAMP, Campinas, Sp, BRAZIL*

MP 509 **Protein/Peptide Labeling Using Novel Acid-Cleavable "Fluorous" Affinity Tags**; Jiang Qian[1,2]; Richard B. Cole[2]; Yang Cai[1,2]; *[1]The Research Institute for Children, New Orleans, New Orleans, LA; [2]Department of Chemistry, University of New Orleans, New Orleans, LA*

MP 510 **Optimization of On-Target Performic Acid Oxidation Method for MALDI Deposited Samples**; Brad J. Williams; William K. Russell; David H. Russell; *Texas A&M University, College Station, TX*

MP 511 **Conjugation of Glutathione with Oxidized Ascorbate: Structural Analysis of an Adduct and its Detection in Cells**; J. Richard Wagner; Peggy Regulus; Jean-Francois Desilets; Klaus Klarskov; *Université de Sherbrooke, Sherbrooke, Canada*

MP 512 **Mass Spectrometry Study of the Oxidative Modifications in Glycated Insulin**; Sofia Guedes; Rui Vitorino; Francisco Amado; Pedro Domingues; *University of Aveiro, Aveiro, Portugal*

MP 513 **Mass Spectrometric Study of the Truncation of Stromal Cell-Derived Factor-1 (SDF-1) by Proteolytic Enzymes in Patients with Myeloproliferative Diseases**; Sool Yeon Cho[1]; Mingjiang Xu[1]; Pratibha Singh[2]; Jonathan Hoggatt[2]; Louis M. Pelus[2]; Ronald Hoffman[1]; John Roboz[1]; *[1]Mount Sinai School of Medicine, New York, NY; [2]Indiana University College of Medicine, Indianapolis, IN*

MP 514 **Substitution of Acetone for Acetonitrile in the LC/MS Analysis of Peptides by Positive ESI**; David D. Weis; *University of Kansas, Lawrence, KS*

MP 515 **Stopped-Flow Biochemical Kinetics Analyzed by Hadamard Transform Time-of-Flight Mass Spectrometry**; Matthew Robbins; Griffin Barbula; Richard Zare; *Stanford University, Stanford, CA*

MP 516 **Permethylation of Peptides on Chromatographic Media**; James Farmar; Heinz Nika; Fa-yun Che; Louis Weiss; Ruth Hogue Angeletti; *Einstein College of Medicine, Bronx, NY*

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MP 517 **High Throughput Screening GSH Adducts Using Hybrid Linear Ion Trap Systems Coupling with Fast Chromatography at Clinically Relevant Dose Concentration**; Elliott Jones[1]; Claire Bramwell-German[1]; Hesham Ghobarah[2]; Hua-fen Liu[1]; *[1]Applied Biosystems, Foster City, CA; [2]Applied Biosystems / MDS Sciex, Concord, ON*

MP 518 **An Analytical Strategy to Study *in vivo* Metabolism of Fipexide Using QqQ_{LIT} and QqTOF Capabilities**; David Tonoli[1]; Emmanuel Varesio[1]; Hans H. Maurer[2]; Gerard Hopfgartner[1]; *[1]University of Geneva, Geneve, Switzerland; [2]University of Saarland, Homburg, Germany*

MP 519 **MP Mediated Amine-Activation of Reduced Nimesulide : Identification of Metabolites by LC-MS**; Min Yang; Mahendra Chordia; Fengping Li; Timothy L Macdonald; *University of Virginia, Charlottesville, VA*

MP 520 **Improved Detection of Reactive Drug Metabolites with Bromine-Containing Glutathione Analog Using Mass Defect and Isotope Pattern Matching**; André LeBlanc; Tze Chieh Shiao; René Roy; Lekha Sleno; *UQAM, Montreal, Canada*

MP 521 **Inexpensive Stable Isotope Labelling Approaches Combined with Mass Spectrometry to Screen and Characterize Reactive Drug Metabolites**; Klaus Klarskov; Daniel Defoy; Witold Neugebauer; Ibrahim Hasibu; *University de Sherbrooke, Sherbrooke, Canada*

MP 522 **Generation and Identification of Reactive Metabolites Using On-Line Liquid Chromatography/ Electrochemistry/Mass Spectrometry;** Sandra Jahn;

Anne Baumann; Wiebke Lohmann; Björn Meermann; Uwe Karst; *University of Münster, Münster, Germany*

MP 523 **Advantages in Utilizing Smaller Thiols to Trap Reactive Intermediates and Elucidate the Site(s) of Adduct Formation**; Wing W Lam; *Johnson and Johnson Pharmaceutical Research and De, Raritan, NJ*

MP 524 **Simultaneous Detection and Quantitation of Iminium Ions by Hyphenated LC with Radioactivity Detector and Mass Spectrometry**; R. F. Xu; J. Silva; H. K. Lim; *J&J PRD, DMPK, Raritan, NJ*

MP 525 **Trapping and Detecting Reactive Cyanide Intermediates without Toxic KCN Addition Using UPLC/QToF MSE**; Don Laudicina; Liping Jin; Ajay Madan; Kayvon Jalali; *Neurocrine Biosciences, San Diego, CA*

MP 526 **Monitoring the Biodistribution and Bioactivity of Anticancer Drugs by MRM-ESI Mass Spectrometry**; Qiyu Qiu; Anne-Laure Larroque; Marcos DiFalco; Line Roy; Bertrand J. Jean-Claude; Bernard F. Gibbs; *McGill University, Montreal, Canada*

MP 527 **Elucidation of a Novel Bioactivation Pathway of 3,4-Unsubstituted Isoxazole by Mass Spectrometry**; Jian Yu; Maria Ribadeneira; *Astrazenaca, Wilmington, DE*

MP 528 **The Alternate Metabolism of Abacavir and its Role in Immune-Mediated Hypersensitivity Reactions in HIV Infected Individuals**; Jeremy Netto[1,3]; Niamh Keane[2,3]; Ian Mullaney[3]; David Nolan[2,3]; Simon Mallal[2,3]; Robert Trengove[1,3]; *[1]Separation Science and Metabolomics Laboratory, Perth, Australia; [2]Royal Perth Hospital, Perth, Australia; [3]Murdoch University, Perth, Australia*

MP 529 **Reactive Metabolite Trapping and Metabolite Identification Using Multiple Reagents and Specific Survey Scans on a Rapid Scanning Linear Ion Trap**; James A. Ferguson[1]; Stanley Rosenberg[1]; Jenny Moshin[1]; LaHoma Easterwood[2]; Sai Y. Chang[3]; *[1]Applied Biosystems, Framingham, MA; [2]CellzDirect, Austin, TX; [3]MSMS Science LLC, Sedona, AZ*

MP 530 **Analysis of Glutathione and Cysteinylglycine Conjugates of (+/-)-anti-7,8-dihydroxy-9,10-epoxy-7,8,9,10-tetrahydro-B[a]P by Liquid Chromatography/ Tandem Mass Spectrometry**; Dipti Mangal[1,2]; Clementina Mesaros[1,2]; Trevor M. Penning[1,2]; Ian A. Blair[1,2]; *[1]center For Cancer Pharmacolo, Philadelphia, PA; [2]Centers of Excellence in Environmental Toxicology, Philadelphia, PA*

MP 531 **Synthesis, Characterization and Identification of Cysteinyl Adduct of 15-Oxo Eicosatetraenoic Acid in Smoker's Urine**; Jasbir S Arora; Ian A. Blair; *University of Pennsylvania, Philadelphia, PA*

MP 532 **A Novel Differential Analysis Algorithm for Low/High Resolution LC/MS Data: Applied to the Detection of Drug Metabolites and GSH-trapped Adducts**; Marco Ruijken; *MsMetrix, Maarssen, Netherlands*

MP 533 **Profiling of Glutathione Conjugates of Electrophilic Metabolites in Plant Responses to Stress Using LC/TOF and Multiplexed CID**; Xiaoli Gao; Abraham J. K. Koo; Jiangyin Bao; Gregg A. Howe; A. Daniel Jones; *Michigan State Unviersity, East Lansing, MI*

MP 534 **Novel AccQ•Tag UPLC/MS Method for High-Throughput Analysis of Amino Acids and Glutathione in Normal and HME-Transformed Human Mammary Epithelial Cell**; Diego F. Cortes[1]; Jenny M. Armenta[1]; Suzy Torty[2]; Steven Akman[2]; Vladimir Shulaev[1]; *[1]Virginia Bioinformatics Institute, Blacksburg, VA; [2]Wake Forest Universty, Winston-Salem, NC*

MP 535 **Metabolism and Export of Lipid Peroxidation Products as Assayed in Human Monocytic THP-1 Cells Using Electrospray LC-MS/MS**; Brandi L. Langsdorf; Cristobal Miranda; Heather Kuiper; Ralph Reed; Fred Stevens; *Oregon State University, Corvallis, OR*

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MP 536 **Application of UV Photodissociation on a QqTOF Enabling Generation and Recording of Unique Fragment Ions on LC Time Scale.**; J.c. Yves Leblanc[1]; Changtong Hao[2]; Chris Lock[1]; Alexandre Loboda[1]; Min J. Yang[1]; K W Michael Siu[2]; Bruce Thomson[1]; *[1]MDS Analytical Technologies, Concord, On, Canada; [2]York University, Toronto, ON*

MP 537 **An *in vitro* Investigation of the Reduction Potential of a Benzothiophene Sulfoxide Metabolite in Liver Microsomes, Cytosol, and Hepatocytes**; Robert M. Iannucci; Carlo Sensenhauser; Shannon Dallas; Waqas Alam; Anthony Streeter; Kao Mark; Jose Silva; Heng-keang Lim; *Johnson and Johnson PRD, Raritan, NJ*

MP 538 **Formula Determination and Relative Quantitation from Overlapping Ion Signals;** Yongdong Wang; Ming Gu; *Cerno Bioscience, Danbury, CT*

MP 539 **Proteomic Investigation of Microbial Transformation of a Roxarsone, a Chicken Feed Additive.**; Partha Basu[1]; Vadiraja Bhat[2]; Peter Chovanec[1]; Stolz John[1]; *[1]Duquesne University, Pittsburgh, PA; [2]Agilent Technologies, Wilmington, DE*

MP 540 **Statistical Differentiation of Xenobiotic Metabolism between Fresh and Cryo-Preserved Hepatocytes Using LC-MS-MS/MS Data from Fast Efficient Tandem Hybrid Instrumentation**; Johnie Brown[1]; Jeffrey Miller[1]; James A. Ferguson[1]; James Hill[2]; *[1]Applied Biosystems, Framingham, MA; [2]CellzDirect, Austin, TX*

MP 541 **Metabolism of Nω-Methylserotonin, a Serotonergic Constituent from Black Cohosh, in Human Liver Microsomes and Intestinal Caco-2 cells**; Dejan Nikolic; Soyoun Ahn; Jinghu Li; Richard B. van Breemen; *University of Illinois College of Pharmacy, Chicago, IL*

MP 542 **Investigation of Lycopene Metabolism and Degradation Products by LC-MS-MS and Stable Isotope Labeling**; Jeff Dahl[1]; Richard B. Van Breemen[2]; *[1]Jeff Dahl, Chicago, IL; [2]University of Illinois, Chicago, IL*

MP 543 **Characterization of *in vitro* Metabolites of Troleandomycin, a Metabolism-Dependent Inhibitor of CYP3A4, by UPLC™ QTOF Mass Spectrometry**; Joanna Barbara; Phyllis Yerino; David Buckley; Mark Horrigan; Paul Toren; Andrew Parkinson; *XenoTech, Lenexa, KS*

MP 544 **Combining Electrochemistry with LC/MS – EC/LC/MS a Powerful Analytical Technique**; Jean-pierre Chervet[1]; Martin Eysberg[1]; Uwe Karst[2]; *[1]Antec Leyden BV, Zoeterwoude, Netherlands; [2]University of Münster, Münster, Germany*

MP 545 **Ultra-Trace Metabolite Identification Using UPLC/FTMS Combined With Chip-Based Nano-LC Separations.**; Jesse L. Balcer; Jeffrey R. Gilbert; David G. Mccaskill; Gerrit J. Deboer; Brian M. Wendelberg; *Dow AgroSciences, Indianapolis, IN*

MP 546 **Characterization of the P450-Isozyme(s) Responsible For the Formation of 5-OH-CP-448,187 and N-oxide-**

CP-448,187 in Human Liver Microsomes by HPLC/ESI/MS/MS; Amin M. Kamel[1]; Wendy Wang[1]; Kevin Colizza[2]; *[1]Pfizer, Inc., Groton, CT; [2]Pfizer, Groton, CT*

MP 547 **Identification of *in vitro* Metabolites of the Potent 5-HT1D Receptor Antagonist CP-448,187 by Using HPLC/RAM/ESI/MS/MS**; Kevin Colizza[2]; Wendy Wang[1]; Amin M. Kamel[1]; *[1]Pfizer, Inc., Groton, CT; [2]Pfizer, Groton, CT*

MP 548 **Characterization of *in vivo* Metabolites of the Potent 5-HT1D Receptor Antagonist, CP-448,187 in Mouse by HPLC/RAM/ESI/MS/MS**; Wendy Wang[1]; Kevin Colizza[2]; Amin M. Kamel[1]; *[1]Pfizer, Inc., Groton, CT; [2]Pfizer, Groton, CT*

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MP 549 **The Detection of Veterinary Residues in Meat Using LC/MS/MS Analysis.**; Stephen J. Lock[1]; Donna Potts[1]; Francisco Mocholi[2]; *[1]Applied Biosystems, Warrington, UK; [2]SAILab, Barcelona, Spain*

MP 550 **Screening of Agrochemicals in Foodstuffs and Water Using Low Temperature Plasma (LTP) Ambient Mass Spectrometry**; Joshua S Wiley[1]; Juan F Garcia-Reyes[1,2]; Jason Harper[1]; Nicholas Charipar[1]; Zheng Ouyang[1]; R. Graham Cooks[1]; *[1]Purdue University, West Lafayette, IN; [2]University of Jaen, Jaen, Spain*

MP 551 **High-Performance Liquid Chromatography Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry of Citrus Extracts: Characterization and Comparisons**; Mark R Crosswhite; *Florida State University, Tallahassee, FL*

MP 552 **MALDI-TOF/TOF Analysis of Sugar Beet Pectin-Protein Complex**; Alberto Nuñez; Marshall L. Fishman; Laurie Fortis; Hoa K. Chau; *USDA-ARS-ERRC, Wyndmoor, PA*

MP 553 **A MALDI Gel Imaging Approach to Improve 2DE Spatial Representation of Highly Homologous Wool Keratin Proteins**; Dr. Santanu Deb-choudhury; S. Clerens; J. E. Plowman; K. Y. Yong; C. D. Cornellison; A. J. Hancock; H. Koehn; A. Thomas; J. M. Dyer; *AgResearch Limited, Christchurch, New Zealand*

MP 554 **Mass Spectrometry Identification of Plant Host Proteins that Interact with Secreted Bean Rust Pathogen Proteins**; Ruiqiang Chen[1,2]; Mark L. Tucker[1]; Caren Chang[2]; Bret Cooper[1]; *[1]USDA-ARS, Beltsville, MD; [2]CBMG, University of Maryland, College Park, MD*

MP 555 **Determination of Coccidiostats in Feed and Animal Produce by LC-MS**; Pavel Metalnikov; Olga Nasyrova; Boris Krapivkin; Alexander Komarov; Alexander Panin; *The All-Russia State Centre for Quality and Standa, Moscow, Russian Federation*

MP 556 **Solid Phase Extraction Combined with Liquid Chromatography–Mass Spectrometry for Pharmacokinetics Study of Enrofloxacin and Metabolites in Fish.**; Wei-Hsun Wang[1]; Tzung-Jie Yang[1]; Chi-Chung Chou[1]; Shao-Kuang Chang[2]; Maw-Rong Lee[1]; *[1]National Chung Hsing University, Taichung, Taiwan; [2]National Taiwan University, Taipei, Taiwan*

MP 557 **Rapid Trace Analysis of Chloramphenicol in Honey Using Molecularly Imprinted Polymer(MIP) LDTD-APCI-MS/MS**; Grégory Blachon[1]; Pierre Picard[2]; E. Real Paquin[1]; *[1]Université Laval, Québec, Canada; [2]Phytronix Technologies, Inc., Quebec, QC*

MP 558 **Using Solid Phase Micro Extraction with Direct Analysis in Real Time Mass Spectrometry to Monitor Fruit Ripening**; A. John Dane; Robert B. Cody; *JEOL USA, Inc., Peabody, MA*

MP 559 **LC/MS/MS Analysis of Aflatoxins from Peanut Butter Using a Novel Two-Stage SPE Clean-Up Process**; Sky Countryman; *Phenomenex, Torrance, CA*

MP 560 **Comparing GC/MS/MS to GC/MS Methods for the Analysis of Pesticide Residues in Fruits and Vegetables**; Philip L. Wylie; Chin-kai Meng; *Agilent Technologies, Wilmington, DE*

MP 561 **HPLC-MS Analysis of Pheromone Glucoconjugates in Oral Secretions of Male Anastrepha Fruit Flies**; Scott Niemann[1]; Spencer S. Walse[2]; *[1]CSS Analytical Company, Inc., Shawnee, KS; [2]United States Department of Agriculture-Agricultur, Parlier, CA*

MP 562 **In Vino Veritas – Simultaneous LC/MS/MS Analysis of Quality Determining Compounds in Wine without Sample Preparation;** Stefanie Wirtz[1]; Volker Heidger[1]; Juergen Wendt[2]; *[1]Institut Heidger, Kesten, Germany; [2]Agilent Technologies, Waldbronn, Germany*

MP 563 **Fast Analysis of Flonicamid and Its Metabolites in Agricultural Foods by RPLC-MS/MS**; Andre Szczesniewski[1]; Elizabeth Culbert[2]; Richard Barry[1]; Vince Herbert[2]; Matt Hengel[3]; *[1]Agilent Technologies, Santa Clara, CA; [2]Washington State University-Tri-Cities, Richland, WA; [3]University of California at Davis, Davis, CA*

MP 564 **Simultaneous Analysis of 14 Mycotoxins, and 150 Pesticides in Crude Extracts of Grains by LC/MS/MS**; Juergen Kunze[2]; Andrea Voller[2]; Hermann Schmalstieg[2]; Ingrid Bujara[2]; Kristin Von Czapiewski[1]; Birgit Schlutt[1]; Andre Schreiber[3]; *[1]Applied Biosystems part of Life Technologies, Darmstadt, Germany; [2]SGS, Hamburg, Germany; [3]Applied Biosystems, Concord, ON*

MALDI SAMPLE PREPARATION, 565 - 583

MP 565 **Three Dimensional MALDI Plates Employing Collimated-Hole Structures used to Coupling High Capacity, High Flow Separations to MALDI-TOF MS.**; Stephen J. Hattan; Marvin Vestal; *Virgin Instruments Corporation, Sudbury, MA*

MP 566 **Is Liquid UV-MALDI a Real Alternative to Solid State UV-MALDI?** Mark W Towers; Kieran Rollin; Ali Tiss; Rainer Cramer; *University of Reading, Reading, UK*

MP 567 **High Sensitivity α-cyano-4-Chlorocinnamic Acid Liquid Matrices for UV-MALDI MS**; Mark W Towers; Rainer Cramer; *The University of Reading, Reading, UK*

MP 568 **Concentration and *in-situ* Detection of Peptides Using MALDI Ionic Liquid Matrices**; Siao-huei Yang; Cing-Hong Cai; Yen-Peng Ho; *National Dong Hwa University, Hualien, Taiwan*

MP 569 **High Versatility and Quantitative Capability at Femtomol Level of the Liquid Matrix 3-Aminoquinoline/CHCA in MALDI Mass Spectrometry**; Yuko Fukuyama; Kaoru Kaneshiro; Kenichi Taniguchi; Sadanori Sekiya; Shinichi Iwamoto; Koichi Tanaka; *Shimadzu Corporation, Kyoto, Japan*

MP 570 **Alternative CHCA-Based Matrices for the Low Molecular Weight Compounds Analysis by UV-MALDI-MS**; Tiffany Porta; Chantal Grivet; Emmanuel Varesio; Gerard Hopfgartner; *School of Pharmaceutical Sciences, Geneva, Switzerland*

MP 571 **New 3D MALDI Plates Composed of Layered, Photo-Etched, Stainless Steel, Sheets.**; Joe Fitzpatrick; Stephen J. Hattan; Kevin Hayden; Marvin Vestal; *Virgin Instruments Corporation, Sudbury, MA*

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MP 572 **LC-NALDI: Using Matrix-Free Nanostructured Targets for Peptide Fractionation and Analysis**; Sergei Dikler; Paul Kowalski; *Bruker Daltonics Inc., Billerica, MA*

MP 573 **Nanoparticle-Induced Fragmentation for Structure Determination of Carbohydrates by MALDI-TOF MS**; Rofe-Amor Obena[2]; Mei-chun Tseng[1]; Ying-Wei Lu[3]; Po-Chiao Lin[3]; Chun-Cheng Lin[3]; Yu-Ju Chen[1]; *[1]Institute of Chemistry, Academia Sinica, Taipei, Taiwan; [2]University of the Philippines-Diliman, Quezon City, Philippines; [3]National Tsing Hua University, Hsinchu, Taiwan*

MP 574 **Inhibitor Encapsulated Nanoparticles for Rapid Fucosidase Identification and Binding-Eptiopes Mapping**; Han-Tsung Huang[2]; Mei-Chun Tseng[2]; Wei Hsu[1,2]; Po-Chiao Lin[2]; Ching-Wen Ho[4]; Chun-Cheng Lin[3]; Chun-Hung Lin[4]; Yu-Ju Chen[2]; *[1]Department of Chemistry, NCU, Taoyuan, Taiwan; [2]Institute of Chemistry, Academia Sinica, Taipei, Taiwan; [3]Insititue of Chemistry, NTHU, Hsinchu, Taiwan; [4]IBC, Academia Sinica, Taipei, Taiwan*

MP 575 **Study of Surface-Assisted Laser Desorption/Ionization Mass Spectrometry using Metal Sulfide Particles as a Matrix;** Akemi Ryoda; Tsuyoshi Yoshioka; Shuji Kagawa; *Mitsubishi Chemical Group, Science & Technology, Yokohama, Japan*

MP 576 **Electric Field Enhanced MALDI Sample Preparation via Induction Based Fluidics**; Drew Sauter; *Nanoliter, LLC, Henderson, NV*

MP 577 **The Design and Preparation of an Adequate Sample Cell Suitable for Solvent-free Multi-Sample MALDI Analysis.**; John Sami Maarouf; Alexandru Cernat; Calvin A. Austin; Sarah Trimpin; *Wayne State University, Detroit, MI*

MP 578 **Solvent-Free MALDI Analysis Avoids Sample Loss and *in vitro* Oxidation of Peptides and Lipids**; Ellen D. Inutan; Thushani N. Herath; Sarah Trimpin; *Wayne State University, Detroit, MI*

MP 579 **Optimization of a Modified Aerospray Deposition Device for the Preparation of Samples for Quantitative Analysis by MALDI TOFMS**; April Holcomb; Kevin G. Owens; *Drexel University, Philadelphia, PA*

MP 580 **On-Line Nano Aerosol Sample Deposition for MALDI Mass Spectrometry**; Yuqian Gao; Murray V. Johnston; *University of Delaware, Newark, DE*

MP 581 **An Improved Calibrant System for MALDI-TOF MS Characterization of Peptides, Proteins, and Synthetic Polymers**; Scott M. Grayson; *Tulane University, New Orleans, LA*

MP 582 **Reverse Thin Layer Method for Enhanced Ion Yields of Oligosaccharides in Matrix-Assisted Laser Desorption/Ionization**; Takashi Nishikaze; Junko Amano; *The Noguchi Institute, Itabashi, JAPAN*

MP 583 **Investigating MALDI Signal Enhancement of Peptides after Selective Extraction by Polymeric Reverse Micelles**; Nadnudda Rodthongkum; Yangbin Chen; Sankaran Thayumanavan; Richard Vachet; *University of Massachusett, Amherst, MA*

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MP 584 **MALDI-MSn Quantitation by Selective Isolation of Analyte and Internal Standard Ions Using a Multi-Notch SWIFT Waveform**; Richard F. Reich; Kyle N. Cromwell; Richard A. Yost; *University of Florida, Gainesville, FL*

MP 585 **Tandem Mass Spectrometry and High Resolution/Accurate Mass Analysis of Metal-Cluster Ions of Pigments from Painted Works of Art**; Michael P. Napolitano[1]; Ping-Chung Kuo[2]; Julie Arslanoglu[3]; Richard A. Yost[1]; *[1]University of Florida, Gainesville, FL; [2]National Formosa University, Yunlin, Taiwan; [3]The Metropolitan Museum of Art, New York, NY*

MP 586 **MALDI-DITMS/MS for High Mass, High Sensitivity and High Resolution Measurement**; Koichi Tanaka; Sadanori Sekiya; Shinichi Iwamoto; *Shimadzu Corporation, Kyoto, Japan*

MP 587 **The Solvent-Matrix Effect of Lipidomics Using an array Plate for MALDI-QIT-TOF-MS**; Evelyn H. Kim[1]; Yangsun Kim[2]; David M. Lubman[1]; *[1]University of Michigan, Ann Arbor, MI; [2]Hudson Surface Technology, Newark, NJ*

MP 588 **LC-MALDI with an Ion Trap - Orbitrap Hybrid Instrumentation: Decoupled Method Setup**; Kerstin Strupat[1]; Huy Bui[2]; Rosa Viner[2]; Justin Blethrow[2]; Yue Xuan[1]; Viatcheslav V. Kovtoun[2]; George Stafford[2]; *[1]Thermo Fisher Scientific (Bremen) GmbH, Bremen, Germany; [2]Thermo Fisher Scientific, San Jose, CA*

MP 589 **Studying Multiple Cupperated Peptides Using MALDI-TOF Mass Spectrometry**; Zhaoxiang Wu; David H. Russell; *Texas A&M University, College Station, TX*

MP 590 **Laser Desorption/Tandem Mass Spectrometry of Doubly Cationized, Singly Charged Ions Found in Painted Works of Art**; Ping-Chung Kuo[1]; Michael P. Napolitano[2]; Vivian E. Cornélio[3]; Julie Arslanoglu[4]; Richard A. Yost[2]; *[1]National Formosa University, Yunlin, Taiwan; [2]University of Florida, Gainesville, FL; [3]Federal University of São Carlos, São Carlos, SP Brazil; [4]The Metropolitan Museum of Art, New York, NY*

MP 591 **Screening for Microbial Protein Over-Expression in Complex Matrix, Using MALDI-LTQ-Orbitrap**; Thomas Moehring[1]; Kerstin Strupat[1]; Michiel Akeroyd[2]; Rob van der Hoeven[2]; *[1]Thermo Fisher Scientific, Bremen, Germany; [2]DSM Food Specialties B.V, Delft, The Netherlands*

MP 592 **Investigation into the Relationship between Proton Affinity and Small Drug-Like Molecule MALDI-QqQ Response**; Kristin Geddes[1]; Debra Mcloughlin[1]; Richard King[2]; Emily Adarayan[1]; *[1]Merck and Co, Inc, West Point, PA; [2]PharmaCadence Analytical, Quakertown, PA*

MP 593 **Balancing the MRM Transition of Small Molecules, Substrate/Product Conversion for Enhances Label-Free Enzyme Inhibitor Screening**; Rakesh Rathore[1]; Jay Corr[2]; Kenneth D. Greis[1]; *[1]University of Cincinnati, Cincinnati, OH; [2]MDS Analytical Technologies, Concord, ON*

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MP 594 **Hemoglobin Analysis Using an LTQ-Orbitrap Top-Down Platform**; Roger Theberge; Weiwei Tong; Giuseppe Infusini; Mark E. McComb; Catherine E. Costello; *Boston University School of Medicine, Boston, MA*

MP 595 **Deciphering Human Cardiac Troponin Modifications for Understanding and Diagnosis of Heart Failure: A Top-Down Mass Spectrometry-Based Disease Proteomics Approach;** Jiang Zhang[1]; Moltu Guy[1]; Qingge Xu[1]; M Shahriar Salamat[1]; Ken H. Young[1]; Jeffery W. Walker[1,2]; Ying Ge[1]; *[1]University of Wisconsin-Madison, Madison, WI; [2]University of Arizona, Tucson, AZ*

MP 596 **Top-Down Protein Identification in Sera from Colorectal Cancer Patients Using 15 Tesla FTICR-MS**; Simone Nicolardi[1]; Yuri E.M. Van Der Burgt[1]; Hans Dalebout[1]; Wilma E. Mesker[1]; Marco R. Bladergroen[1]; Remco Swart[2]; Jens Fuchser[3]; Magnus Palmblad[1]; Rob A. Tollenaar[1]; André M. Deelder[1]; *[1]Leiden University Medical Ce, Leiden, Netherlands; [2]Dionex, Amsterdam, the Netherlands; [3]Bruker Daltonik GmbH, Bremen, Germany*

MP 597 **Mass Spectrometric Approaches to the Identification and Characterization of the Target Proteins of (R)-Lacosamide Drug**; Onrapak Reamtong[1]; Steven W. Cotten[2]; Pierre Morieux[2]; Ki Duk Park[2]; Rihe Liu[2]; Harold Kohn[2]; Claire Eyers[1]; Simon J. Gaskell[1]; *[1]University of Manchester, Manchester, UK; [2]UNC Eshelman, Chapel Hill, NC*

MP 598 **A Widely Applicable Methodology for Quantitative Analysis of Therapeutic Proteins in Human Plasma**; Jean-Marie Schmitter[1]; Fabien Xuereb[1]; Stephane Chaignepain[1]; Frederic Godde[1]; Dominique Breilh[1]; Marie-Claude Saux[1]; Christof Lenz[2]; Matthias Glueckmann[2]; *[1]University of Bordeaux, Bordeaux, France; [2]Applied Biosystems, Darmstadt, Germany*

MP 599 **Large-Scale Identification and Quantification of Differentially Expressed Proteins Responding to Cisplatin Treatment in A2780 & A2780CIS Ovarian Cancer Cells**; Steve Nguyen; Michael Lund Nielsen; Chanchal Kumar; Matthias Mann; *Max Planck Institute for Biochemistry, D Martinsried, Germany*

MP 600 **Proteome Analysis of Superior Temporal Gyrus in Schizophrenics and Non-Human Primates Treated with Anti-Psychotics Demonstrate Disease and Drug Specific Changes**; Nilesh Tannu[1]; Shixin Sun[2]; Richard Pintal[2]; Steven E Arnold[3]; Scott E. Hemby[1]; *[1]Wake Forest University School of Medicine, Winston Salem, NC; [2]Applied Biosystems, Framingham, MA; [3]University of Pennsylvania School of Medicine, Philadelphia, PA*

MP 601 **Using Stable Isotopes and Tandem MS to Study the Metabolism of CNS-Derived Apolipoprotein E Isoforms**; Kristin R Wildsmith; Wendy C Sigurdson; Randall J Bateman; *Washington University, St. Louis, MO*

MP 602 **iTRAQ 8plex Analysis of a Membrane Enriched Sub-Proteome from Post-Mortem Brain in Schizophrenia and Control Subjects.**; Jane A English[1]; Bruno Manadas[2]; David R Cotter[3]; Michael J Dunn[1]; *[1]UCD Conway Institute, University College Dublin,, Dublin, Ireland; [2]Center for Neuroscience and Cell Biology, Cantanhede, Portugal; [3]Royal College of Surgeons, Dublin, Ireland*

MP 603 **Characterization of Proteins in Cerebrospinal Fluid of Patients with HIV-Associated Neurocognitive Disorder using iTRAQ and Mass Spectrometry**; Dawn Chen[1]; Caroline F Anderson[1]; Robert J. Cotter[2]; Ned Sacktor[1]; Justin McArthur[1]; Avindra Nath[1]; *[1]Department of Neurology, Johns Hopkins University, Baltimore, MD; [2]Middle Atlantic MS Laboratory, Baltimore, MD*

MP 604 **Proteomic Alterations in Response to *in vitro* Treatment with Velcade, Doxorubicin, and Dexamethasone in Multiple Myeloma Using 8-plex iTRAQ**; Dominik Dytfeld[2]; Madhu Prasad[2]; Vadiraja B. Bhat[3]; Rong Zhao[2]; Alexey I. Nesvizhskii[2]; Andrzej J. Jakubowiak[2]; Arun Sreekumar[1]; *[1]Medical College of Georgia, Augusta, GA; [2]University of Michigan, Ann Arbor, MI; [3]Agilent Technologies, Wilmington, DE*

MP 605 **Relative Serum Protein Quantification Based upon ICPL and 2D-LC-MS Identifies Potential Frailty Biomarkers in Elderly Patients**; Andrei Turtoi; Gabriel Mazzucchelli; Rowan L. Dobson; Edwin De Pauw; *University of Liege, Liege, Belgium*

MP 606 **Unambiguous Detection and Quantitation of Full-length Thioredoxin (TRX) and Truncated Thioredoxin (TRX80) in Complex Samples by MALDI**; Susan C Follstaedt[1]; David R Graham[1]; Keling Dong[2]; Marjorie S Minkoff[2]; M. Christine Zink[1]; Christie L Hunter[2]; *[1]Johns Hopkins, Baltimore, MD; [2]Applied Biosystems, Foster City, CA*

MP 607 **Development of an srm-based apolipoprotein Panel Assay**; Amol Prakash[3]; Mingming Ning[2]; Taha Rezai[4]; Bryan Krastins[1]; David Sarracino[4]; Michael Athanas[5]; Mary F Lopez[1]; *[1]ThermoFisher, Cambridge, MA; [2]Massachusetts General Hospital, Harvard, Boston, MA; [3]ThermoFisher Scientific, Cambridge, MA; [4]Thermo Fisher Scientific, San Jose, CA; [5]VAST Scientific, Wayland, MA*

MP 608 **Development of Quantitative Mass Spectrometry Assays for Cellular Pathways: Elucidating Drug Resistance in Multiple Myeloma**; Yun Xiang; Lori Hazlehurst; John Koomen; *H. Lee Moffitt Cancer Center, Tampa, FL*

MP 609 **Proteomic Workflow for Discovery of Serum Carrier Protein-Bound Biomarker Candidates of Alcohol Abuse Using Liquid Chromatography - Tandem Mass Spectrometry**; Heather N. Ringham; Xianyin Lai; David W. Crabb; Suthat Liangpunsakul; Frank Witzmann; *Indiana University School of Medicine, Indianapolis, IN*

MP 610 **Rapid Proteomics Approach for the Identification of Peptide Hydrazide Adducts by Atmospheric Pressure MALDI MS/MS**; Seshu Gudlavalleti[1,1]; Sudha Chennasamudram[2]; Jane Razumovskaya[1,1]; Appavu Sundaram[1,1]; Vladimir M. Doroshenko[1,1]; *[1]Science and Engineering Serv, Columbia, MD; [2]Center for Biologics Evaluation and Research (FDA), Bethesda, MD*

MP 611 **Interest of a MALDI-FTICR Mass Spectrometry Approach for Identification of Protein Targets involved in Photodynamic Therapy**; David Da Silva[1]; Thierry Wasselin[2]; Benoît Maunit[1]; Vincent Carre[1]; Lina Bezdetnaya[3]; Jean Francois Muller[1]; *[1]LSMCL Université Paul Verlaine, Metz, France; [2]LSMBO, Strasbourg, France; [3]CRAN-CAV, Nancy, France*

MP 612 **Sample Preparation and Instrumental Protocols for Improved Reflectron and LIFT Detection of Ions Up to 10 kDa**; Christine Bunai[1]; Julius Nyalwidhe[2]; Lisa H. Cazares[3]; Dennis Manos[1]; William E. Cooke[1]; Dariya Malyarenko[1]; *[1]College of William and Mary, Williamsburg, VA; [2]Eastern Virginia Medical Sch, Norfolk, VA; [3]Eastern Virginia Medical School, Norfolk, VA*

MP 613 **Proteomic Analysis of FFPE Amyloid Plaques Using Laser Microdissection and Nano-Flow LC-MS/MS**; Jason D Theis; Jeff D Gamez; Julie A Vrana; Karen L Grogg; Ahmet Dogan; *Mayo Clinic, Rochester, MN*

MP 614 **Mining the Archival Formalin-Fixed Proteome: Method Optimisation and Validation of an Efficient Label-Free Quantitative Shotgun Proteomic Strategy**; Niroshini Nirmalan[1]; Christopher Hughes[2]; Therese McKenna[2]; Jianhe Peng[1]; James Langridge[2]; Patricia Harnden[1]; Peter Selby[1]; Rosamonde E. Banks[1]; *[1]University of Leeds, Leeds, UK; [2]Waters Corporation, Manchester, UK*

MONDAY POSTERS

MP 615 **Rapid Detection of Proteins in Complex Mixtures by Extractive Electrospray Ionization Mass Spectrometry**; Shuiping Yang[1]; Huanwen Chen[1,2]; Jianqiang Li[1]; Bin Hu[1]; Xie Zhang[1]; Yufen Zhou[1]; Lili Zhang[2]; *[1]East China Institute of Technology, Fuzhou, P. R. China; [2]Jilin University, Changchun, P. R. China*

MP 616 **Development of a Breast Cancer Tissue Specific AMT Database: A New Tool for Biomarker Discovery**; Arzu Umar[1]; Heather M. Mottaz[2]; Samuel O. Purvine[2]; Anita M. Trapman-Jansen[1]; Astrie Thakoursingh[1]; Theo M. Luider[3]; John A. Foekens[1]; Ljiljana Pasa-tolic[2]; *[1]Erasmus MC, Medical Oncology, Rotterdam, Netherlands; [2]Pacific Northwest National Laboratory - Battelle, Richland, WA; [3]Erasmus MC, Neuro-oncology, Rotterdam, Netherlands*

MP 617 **Approaching Solid Tumor Heterogeneity by Tissue Proteomics Using Laser Capture Microdissection and Biological Mass Spectrometry**; Donald Johann[1]; Jaime Rodriquez-Canales[1]; Sumana Mukherjee[1]; Darue A. Prieto[2]; Jeffrey Hanson[1]; Michael Emmert-Buck[1]; Timothy D. Veenstra[3]; Josip Blonder[3]; *[1]NIH, Bethesda, MD; [2]NIC-Frederick (SAIC), Frederick, MD; [3]SAIC-Frederick, Inc., Frederick, MD*

MP 618 **Statistical Significance in MS-Based Label-Free Protein Quantification Analysis Applied in Clinical Research**; Daniel C. Chamrad[1]; Barbara Sitek[2]; Sebastian Link[2]; Christian Stephan[2]; Katharina Podwojski[2]; Kai Stühler[2]; Martin Blueggel[1]; Korte Birgit[2]; Helmut E. Meyer[2]; *[1]Protagen AG, Dortmund, Germany; [2]Ruhr-University Bochum, Dortmund, Germany*

MP 619 **Optimized Two-Dimensional Chromatographic Methods for Peptide Biomarker Discovery and Validation in Clinical Samples**; Keith Fadgen[1]; Martha Stapels[1]; Jim Langridge[1]; J. Will Thompson[2]; Arthur Moseley[2]; *[1]Waters Corporation, Milford, MA; [2]Duke University School of Medicine, Durham, NC*

MP 620 **Application of Peptide Library-Based Affinity-Chromatography to Analysis of Saliva Proteome**; Zhiguo Zheng[2]; Nagarajan Chandramouli[1]; Weimin Mao[2]; Zhiqiang Ling[2]; Qing Fang[1]; Daniel Malamud[3]; Haiteng Deng[1,3]; *[1]The Rockefeller University, New York, NY; [2]Zhejiang Cancer Research Institute, Hangzhou, China; [3]New York University, New York, NY*

MP 621 **Labeling of Plasma Glutathione and Ophthalmate from 2H-Enriched Body Water: A Noninvasive Probe of the Redox Status of the Liver**; Rajan S. Kombu[1]; Guofang Zhang[1]; John J. Mieyal[1]; Vernon E. Anderson[1]; Joanne K. Kelleher[2]; Juan R. Sanabria[1]; Henri Brunengraber[1]; *[1]Case Western Reserve University, Cleveland, OH; [2]Massachusetts Institute of Technology, Cambridge, MA*

ION ACTIVATION / DISSOCIATION, 622 - 644

MP 622 **Ion Conformation Changes in the Ion Trap / Drift Cell Interface on the Microsecond Timescale**; Gregg Schieffer[1]; Qin Zhao[1]; Derrick L. Morast[1]; Ethan R. Badman[2]; R. Sam Houk[1]; *[1]Iowa State University, Ames, IA; [2]Hoffmann-La Roche Inc., Nutley, NJ*

MP 623 **Discrimination of Steroidal Glycoside Isomers by Collisionally Activated Dissociation of Transition Metal Complexes**; Xiaoji Cao; *Zhejiang university of Technology, Hangzhou, China*

MP 624 **The Thermochemical Studies of Protonated Amine-Crown Ether Complexes: Extension of the Kinetic Method.**; Michael Zickus; Sara Koepke; Kevin Chong; Victor Ryzhov; *Northern Illinois University, Dekalb, IL*

MP 625 **Multi-Pass UV-Photodissociation Implemented on a Hybrid QqTOF Mass Spectrometer for LC Analysis**; Changtong Hao[1]; J.C. Yves Le Blanc[2]; Alexandre Loboda[2]; Bruce Thomson[1,2]; K W Michael Siu[1]; *[1]CRMS, York University, Toronto, Canada; [2]MDS Analytical Technologies, Concord, ON, Canada*

MP 626 **Infrared Multiphoton Dissociation of DNA Anions and Cations in a Dual-Cell Linear Ion Trap**; Suncerae Smith[1]; Myles Gardner[1]; James Madsen[1]; Aaron Ledvina[2]; Jennifer Brodbelt[1]; *[1]University of Texas - Austin, Austin, TX; [2]UW Madison, Madison, WI*

MP 627 **UV Photodissociation of Carboxy-Modified Peptides**; Byoung Joon Ko[1]; Jennifer Brodbelt[2]; *[1]UT-Austin, Austin, TX; [2]The University of Texas, Austin, TX*

MP 628 **Top-Down Protein Fragmentation by Infrared Multiphoton Dissociation in a Dual Cell Linear Ion Trap**; James Madsen[1]; Myles Gardner[1]; Suncerae Smith[1]; Aaron Ledvina[2]; Jennifer Brodbelt[1]; *[1]University of Texas - Austin, Austin, TX; [2]UW Madison, Madison, WI*

MP 629 **Mass-Analyzed-Threshold-Ionization: A Versatile Method for the stUdy of the Structure of Halogenated Aromatic Compounds and Noble Gas Clusters.**; Jurgen Grotemeyer; Frank Witte; *Christian-Albrechts-Univ, Kiel, Germany*

MP 630 **Protonated Tryptophan Radicals in the Gas Phase**; Joshua A Gregersen; Frantisek Turecek; *University of Washington, Seattle, WA*

MP 631 **Metastable Atom-Activated Dissociation (MAD) within a Quadrupole Ion Trap Mass Spectrometry (QIT-MS).**; Shannon Cook; Glen Jackson; *Ohio University, Athens, OH*

MP 632 **Comparison of Metastable Atom-Activation Dissociation (MAD), ETD and CAD of Peptides and Modified Peptides**; Carolyn M. Zimmermann[1]; Shannon Cook[1]; Glen Jackson[1]; Ralf Hoffmann[2]; *[1]Ohio University, Athens, OH; [2]Universität Leipzig, Leipzig, Germany*

MP 633 **Study by FTICRMS and SORI–CID, ECD and IRMP FTICRMS^n of Cluster Ions produced by Electrosprayed $KBrO_3$ Solutions**; Frédéric Aubriet; *LSMCL Université Paul Verlaine, Metz, France*

MP 634 **Higher Efficiency Protein Tandem Mass Spectrometry Using Multiple Correlated Harmonic Excitation Fields- (multi-CHEF)-ECD-FTICR-MS**; N Murat Karabacak[1]; Qi Wang[1]; Michael Easterling[2]; Jeffrey Agar[1]; *[1]Brandeis University, Waltham, MA; [2]Bruker Daltonics, Inc., Billerica, MA*

MP 635 **Investigation Into the use of Lys-N Combined with Electron Transfer Dissociation on a Quadrupole Time-of-Flight Mass Spectrometer for Peptide Sequencing**; Jim Langridge[1]; Jeff Brown[2]; Shabaz Mohammed[3]; Nadia Taouatas[3]; Iain D G Campuzano[1]; Albert J.R. Heck[3]; *[1]Waters Corporation, Manchester, UK; [2]Waters Micromass MS Technologies, Manchester, UK; [3]Utrecht University, Utrecht, Netherlands*

MP 636 **Radio Frequency-Free Electromagnetostatic Cell for ECD, CID and Combined ECD/CID Mass Spectrometry**; Valery Voinov[1,2]; Joseph S Beckman[1]; Max L. Deinzer[1]; Douglas F. Barofsky[1]; *[1]OSU, Corvallis, OR; [2]PIBOC, RAS, Vladivostok, Russia*

MP 637 **Activated Ion ECD in Radio Frequency Ion Trap for Precise *de novo* Peptide Sequencing**; Hiroyuki Satake; Akihito Kaneko; Naomi Manri; Atsumu Hirabayashi; Takeshi Sakamoto; *Central Research Laboratory, Hitachi Ltd., Tokyo, Japan*

MP 638 **Probing ECD Charge Reduced Ions Using ECD and CID (ECD/ECD and ECD/CID)**; Daniel A Thomas; Takashi Baba; Gary L. Glish; *University of North Carolina, Chapel Hill, NC*

MP 639 **IR Activated Ion-Electron Capture Dissociation in an rf Ion Trap**; Natalie Thompson[1]; Jared Bushey[2]; Takashi Baba[1]; Gary L. Glish[1]; *[1]University of North Carolina, Chapel Hill, NC; [2]Agilent Technologies, Wilmington, DE*

MP 640 **Gas-Phase Ion-Electron Reactions and Vibrational Activation of Electrosprayed Intact Proteins in Negative Ion Mode**; Hangtian Song; Kristina Hakansson; *University of Michigan, Ann Arbor, MI*

MP 641 **Electron Transfer Dissociation of Intact Protein Complexes**; Shaynah Browne[1]; Jonathan Wilson[2]; Desmond Kaplan[2]; Richard Vachet[1]; *[1]University of Massachusetts, Amherst, MA; [2]Bruker Daltonics, Inc., Billerica, MA*

MP 642 **Enhanced Electron Transfer Dissociation Efficiency through Fixed Charge Derivatization of Peptides**; Lisa A Vasicek[1]; Jennifer Brodbelt[1]; *[1]University of Texas, Austin, TX*

MP 643 **From Molecular Structure to Thermodynamics: Amino Acid Property Role in Activated Ion Electron Capture Dissociation of Peptides**; Aleksey Vorobyev; Hisham Ben Hamidane; Yury O. Tsybin; *Ecole Polytechnique Federale, Lausanne, Switzerland*

MP 644 **Effect of Charge state and Size on the Fragmentation of Oligonucleotides under EDD : Role of Radical site**; Viet hung Nguyen; Carlos Afonso; Jean-Claude Tabet; *Université Paris 6, Paris, France*

ELEMENTAL ANALYSIS AND ISOTOPE RATIO MS, 645 - 652

MP 645 **Ultra-Trace Measurements of Lead-210 in Natural Occurring Radioactive Materials by ICP-MS**; Khalid A. Al-saad[1]; Mohamed Amr[1]; Nagwa Zahran[2]; Abdul-Fattah Helal[2]; *[1]Qatar University, Doha, Qatar; [2]Atomic Energy Authority, Cairo, Egypt*

MP 646 **Analytical Strategies for Lanthanum Speciation in Human Serum by Liquid Chromatography Coupled to ICP-MS, ESI-Q-TOF-MS and QIT-MS**; Lidia Siemieniako[2]; Josephine Bunch[1]; Alan G. Cox[2]; Cameron W. Mcleod[2]; *[1]University of Birmingham, Birmingham, UK; [2]University of Sheffield, Sheffield, UK*

MP 647 **Chemical Speciation of Bismuth by Gas Chromatography Coupled with High-Resolution ICP-MS;** Jerzy Mierzwa; *University of Central Florida, Orlando, FL*

MP 648 **Application of Cluster SIMS for the Analysis of Nanomaterials;** Sidhartharaja Rajagopalachary; Stanislav Verhoturov; Chih-Hao Hsia; Dong Hee Son; Emile A. Schweikert; *Texas A&M University, College Station, TX*

MP 649 **Effect of External Energy on Isotope Abundances of 1-2-4-Triazole and 2-Methyl Imidazole.**; Harish K. Shettigar[1]; Rama Mohan R. Tallapragada[2]; *[1]Adjunct Scientist,MGV's Pharmacy College, Mumbai, India; [2]Retired Professor - I.I.T.Bombay, Mumbai, India*

MP 650 **Effect of External Energy on Isotope Abundances of 2-Chloroacetamide, 2-4-Dichloro Phenol And Resorcinol**; Archana Bulbule[1]; Rama Mohan R. Tallapragada[2]; *[1]Adjunct Scientist,MGV's Pharmacy College, Mumbai, India; [2]Retired Professor-I.I.T.Bombay, Mumbai, India*

MP 651 **Effect of External Energy on Isotope Abundances of 2,6-Diaminopyridine, 4- Methoxyphenol and 2,4-Dichlorophenol**; Mahendra K. Trivedi[1]; Rama Mohan R. Tallapragada[2]; *[1]Adjunct Scientist,M. G. Vidyamandir's Pharmacy Col, Mumbai, India; [2]Retired Professor,I.I.T.Bombay, Mumbai, India*

MP 652 **Change in Isotope Abundance and Crystal Characteristics of Acrylamide, P-Anisidine and Butylated Hydroxytoulene Treated with External Energy**; Shrikant A. Patil[1]; Rama Mohan R. Tallapragada[2]; *[1]Adjunct Scientist,MGV's Pharmacy College,Nashik, Mumbai, India; [2]Retired Professor-I.I.T.Bombay, Mumbai, India*

GC/MS, 653 - 672

MP 653 **The Use of Low-Pressure Positive Chemical Ionization GC/MS for the Characterization of Fatty Acid Methyl Esters (FAME)**; Gail A Harkey[1]; Douglas Cameron[2]; James Chang[1]; *[1]Thermo Fisher Scientific, Schaumburg, IL; [2]Montana Tech, Butte, MT*

MP 654 **Comparison of Alternative GC/MS Carrier Gases**; William D. Goodman; Andy N. Tipler; Adam J. Patkin; *PerkinElmer, Inc, Shelton, CT*

MP 655 **Introducing a New Advanced Data Processing Software for Mass Spectrometry Using Spectral Deconvolution and Chemomteric Data Analysis**; Gerhard Horner; Nick Bukowski; Gareth Roberts; *ALMSCO International, Bridgend, UK*

MP 656 **High Speed Quantitative GC/MS-MS Data Acquisition**; Bill Russ; Thomas P Doherty; Jeffrey Kernan; Randy Roushall; Nora Gee; Jim Foote; Knute Kresie; Congshi Huang; Harry Bunting; *Agilent Technologies, Santa Clara, CA*

MP 657 **Unique *para*-Effect in Electron Ionization Mass Spectra of Di(perfluoroacyl) Derivatives of Bifunctional Aminobenzenes**; Kirill Tretyakov[1]; Roman Borisov[2]; Nino Todua[1]; Stephen Stein[1]; Vladimir Zaikin[2]; *[1]National Institute of Standards and Technology, Gaithersburg, MD; [2]Topchiev Institute of Petrochemical Synthesis RAS, Moscow, Russia*

MP 658 **Enhanced Sensitivity for Biomarker Characterization in Crude Oil by GC-SRM**; J. Michael Moldowan[1]; David A. Zinniker[1]; Melissa Churley[2]; Harry Prest[2]; Matthew S. Klee[4]; Celso Blatt[3]; *[1]Stanford University, Stanford, CA; [2]Agilent Technologies, Santa Clara, CA; [3]Agilent Technologies Brazil, Sao Paulo, Brazil; [4]Agilent Technologies Office, Wilmington, DE*

MP 659 **Applications of TG-MS and TG-GC/MS to Polymers**; Kevin Menard; William Goodman; *PerkinElmer LAS, Shelton, CT*

MP 660 **Investigation of Hazardous, Volatile Hydrocarbons in Commercial Beverages**; Sarah J Saylor[1]; Catherine Bentzley[1]; *[1]University of the Sciences in Philadelphia, Philadelphia, PA*

MP 661 **Fragmentation of Isomers of 4-keto C10H20O as a Means of Understanding EI Behavior for Purposes of Structural Elucidation of Unknowns**; O. David Sparkman; Matthew Curtis; Monika Kaur; Jianhua Ren; Patrick R. Jones; *University of the Pacific, Antioch, CA*

MP 662 **Using Comprehensive Gas Chromatographic Retention Index Collection to Aid Compound Identification from GC/MS Data**; Valeri I Babushok[2]; Stephen E. Stein[2]; Igor Zenkevich[3]; Peter Linstrom[2]; O. David Sparkman[1]; *[1]University of the Pacific, Antioch, CA; [2]NIST, Gaithersburg, MD; [3]Chemical Research Institute of St. Petersburg Sta, St. Petersburg, Russia*

MP 663 **Devleopment and Validation of a GC/MS Method to Detect Sulfonic Acid Esters in Mesylate Salt Drug**

Substances and Drug Products; Alina Domin-Turza; Samantha Leidner; Esther Hwang; Paul M. Bigwarfe Jr.; *Hospira, Inc., Lake Forest, IL*

MP 664 **Sensitivity Comparison of Electron and Negative Chemical Ionizations for Derivatized Aldehydes**; Josef Beranek; Alena Kubatova; *University of North Dakota, Chemistry Department, Grand Forks, ND*

MP 665 **A Sensitive and Specific Methodology for Furfural Determination in a Pharmaceutical Product Using Headspace GC/MS and GC/FID**; Yieng-hau Han; Jennifer Jakubowski; Zhong Li; Qingxi Wang; *Merck Co., West Point, PA*

MP 666 **Applying Headspace Trap Technology to the GC/MS Analysis of Volatiles in Children's Products**; William D. Goodman; Adam J. Patkin; Andrew N. Tipler; *PerkinElmer, Inc, Shelton, CT*

MP 667 **Relative Area Quantitation of Natural Product Compounds Using GC/MS and Deconvolution Algorithms**; Michelle Lee; Albert Robbat; *Tufts University, Medford, MA*

MP 668 **Mass Spectra of Polyethylene Glycols, Glycol Acids, and Derivatives by GC-MS**; Yufang Zheng; Yuxue Liang; Edward White V; Stephen E. Stein; *NIST, Gaithersburg, MD*

MP 669 **Human Plasma Free 8-iso-PGF2α Quantified Using a Modified Immunoaffinity Isolation-Stable Isotope Labeled Internal Standard GC/NICI/MS Technique.**; Xianghong Chen; Kevin Yarasheski; *Washington University School of Medicine, Saint Louis, MO*

MP 670 **Confident Unknown Identification of SVOC Compounds by Combining NIST Library Search with Elemental Composition Determination**; Jianping Chen[1]; O. David Sparkman[2]; Ming Gu[3]; *[1]Connecticut State Department of Environmental, Windsor, CT; [2]University of the Pacific, Antioch, CA; [3]Cerno Bioscience, Yardley, PA*

MP 671 **The Measurement of Native Compounds in a Candidate Urine Standard Reference Material (SRM 3671 Smokers' Urine) by Gas Chromatography/Mass Spectrometry**; Bruce A. Benner, Jr.; Lane C. Sander; *NIST, Gaithersburg, MD*

MP 672 **Using a Novel Heartcut Device for Multidimensional GC to Reveal Small Peaks Otherwise Obscured by Large Peaks in Mass Chromatograms**; Andrew Tipler[1]; William D. Goodman[3]; Adam J. Patkin[2]; *[1]PerkinElmer Inc., Trumbull, CT; [2]PerkinElmer, Inc, Shelton, CT; [3]PerkinElmer, Shelton, CT*